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**Rules of  
Department of Natural Resources  
Division 10—Air Conservation Commission  
Chapter 5—Air Quality Standards and  
Air Pollution Control Rules Specific  
to the St. Louis Metropolitan Area**

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**Title 10—DEPARTMENT OF  
NATURAL RESOURCES  
Division 10—Air Conservation  
Commission**

**Chapter 5—Air Quality Standards and  
Air Pollution Control Rules  
Specific to the St. Louis  
Metropolitan Area**

**10 CSR 10-5.010 Ambient Air Quality  
Standards**

(Rescinded February 11, 1978)

**10 CSR 10-5.020 Definitions**

(Rescinded February 11, 1978)

**10 CSR 10-5.030 Maximum Allowable  
Emission of Particulate Matter From Fuel  
Burning Equipment Used for Indirect  
Heating**

*PURPOSE: This rule restricts the emission of particulate matter from fuel burning equipment used for indirect heating except where 10 CSR 10-6.070 would be applied.*

(1) General Provisions.

(A) This rule applies to installations which have indirect heating sources.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(C) The heat input used for each indirect heating source shall be the equipment manufacturer's or designer's guaranteed maximum input in millions of British Thermal Units (BTUs) per hour, whichever is greater.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5).

(E) For the purpose of this rule only, the following terms shall have the meaning ascribed:

1. Existing—means any source which was in being, installed or under construction on February 15, 1979, except that if any source is subsequently altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing but shall be considered as new; and

2. New—means any source which is not an existing source, as defined in paragraph (1)(E)1.

(F) This regulation shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070.

(G) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may

require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Permits Required.

(2) Maximum Allowable Particulate Emission Rate (ER) From Existing Indirect Heating Sources.

(A) The total heat input of all existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate ER, which is to be applied to each existing indirect heating source within the installation. After that, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate ER for an installation of existing indirect heating sources with a heat input rate of less than ten (10) million BTUs per hour shall be 0.60 pounds per million BTUs of heat input.

2. The maximum allowable particulate ER for an installation of existing indirect heating sources with a heat input rate equal to or greater than ten (10) million BTUs per hour and less than or equal to five thousand (5000) million BTUs per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where

E = the maximum allowable particulate ER in pounds per million BTUs of heat input, rounded off to two (2) decimal places; and  
Q = the installation heat input in millions of BTUs per hour.

3. The maximum allowable particulate ER for an installation of existing indirect heating sources with a heat input rate greater than five thousand (5000) million BTUs per hour shall be 0.12 pounds per million BTUs of heat input.

(3) Maximum Allowable Particulate ER From New Indirect Heating Sources.

(A) The total heat input of all new and existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate ER which is to be applied to each new indirect heating source within the installation. The maximum allowable particulate ER from the existing indirect heating sources within such an installation shall be determined as specified in 10 CSR 10-5.030(2). After that, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate ER for new sources in an installation of indirect heating sources with a heat input rate of less than ten (10) million BTUs per hour shall be 0.40 pounds per million BTUs of heat input.

2. The maximum allowable particulate ER for new sources in an installation of indirect heating sources with a heat input rate equal to or greater than ten (10) million BTUs per hour and less than or equal to one thousand (1000) million BTUs per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where

E = the maximum allowable particulate ER in pounds per million BTU of heat input, rounded off to two (2) decimal places; and  
Q = the installation heat input in millions of BTUs per hour.

3. The maximum allowable particulate ER for new sources in an installation of indirect heating sources with a heat input rate greater than one thousand (1000) million BTUs per hour shall be 0.10 pounds per million BTUs of heat input.

(4) Compliance with this rule shall be accomplished by any installation as expeditiously as practicable, but in no case shall final compliance extend beyond three (3) years (March 25, 1979) from the effective date of this rule (March 25, 1976). In the interim each installation shall meet the allowable particulate emission rate applicable to that installation on October 25, 1978.

(5) Alternate Method of Compliance.

(A) Compliance with this rule also may be demonstrated if the weighted average ER of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in section (2) or (3). The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^n (ER_i \cdot Q_i)}{\sum_{i=1}^n Q_i}$$

where

WAER = the weighted average ER in pounds per million BTUs;

ER<sub>i</sub> = the actual ER of the i<sup>th</sup> indirect heating source in pounds per million BTUs;  
 Q<sub>i</sub> = the rated heat input of the i<sup>th</sup> indirect heating source in millions of BTUs per hour;  
 and  
 n = the number of indirect heating sources in the average.

(B) Installations demonstrating compliance with this rule in accordance with the requirements of section (5) shall do so by making written application to the director. The application shall include the calculations performed in paragraph (5)(A)1. and all necessary information relative to making this demonstration. After written approval by the director, the ER used in the calculations of paragraph (5)(A)1. shall become the maximum allowable particulate ER for each specified indirect heating source under this rule.

(C) Section (5) only shall apply—

1. To indirect heating sources while burning coal; and

2. If the maximum allowable particulate ER determined in subsection (5)(B) for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from section (2) or (3) using the rated heat input, Q<sub>i</sub>, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Rescinded and readopted: Filed Aug. 11, 1978, effective Feb. 11, 1979. Amended: Filed March 14, 1984, effective Sept. 14, 1984.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited**

*PURPOSE: This rule prohibits the operation of hand-fired fuel-burning equipment.*

(1) General.

(A) This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, fires used for recreational purpose nor to fires used solely for the preparation of food by barbecuing.

(B) Hand-fired fuel-burning equipment is any stove, furnace or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

(2) Prohibition.

(A) After three (3) years (March 25, 1976) from the effective date of this regulation (March 25, 1976), it shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area.

(B) The director may order that any hand-fired fuel-burning equipment not be used at any time earlier than three (3) years (March 25, 1976) from the adoption of this regulation (March 25, 1976), whenever that equipment has been found in violation of any air contaminant emission regulation on three (3) or more occasions in any six (6)-month period.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.050 Restriction of Emission of Particulate Matter From Industrial Processes**

*PURPOSE: This rule restricts the emission of particulate matter in the source gas of an operation or activity except where 10 CSR 10-5.030, 10 CSR 10-5.080 and/or 10 CSR 10-6.070 would be applied.*

(1) General Provisions.

(A) This regulation applies to any operation, process or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

(B) Process weight means the total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels and excluding air introduced for purposes of combustion.

(C) Process weight rate means a rate established as follows:

1. For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion, divided by the number of hours of that period or portion;

2. For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during that period; and

3. Where the nature of any process or operation or the design of any equipment is to

permit more than one (1) interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director.

(2) Emission Limitations.

(A) Except as provided for in subsection (2)(B), no person shall cause, suffer, allow or permit the emission of particulate matter in any one (1) hour from any source in excess of the amount shown in paragraph (2)(A) Table I for the process weight allocated to that source.

**Table I**

| Process Weight Rate | Rate of Emission |         |
|---------------------|------------------|---------|
|                     | Lb/Hr            | Tons/Hr |
| 100                 | 0.05             | 0.551   |
| 200                 | 0.10             | 0.877   |
| 400                 | 0.20             | 1.40    |
| 600                 | 0.30             | 1.83    |
| 800                 | 0.40             | 2.22    |
| 1,000               | 0.50             | 2.58    |
| 1,500               | 0.75             | 3.38    |
| 2,000               | 1.00             | 4.10    |
| 2,500               | 1.25             | 4.76    |
| 3,000               | 1.50             | 5.38    |
| 3,500               | 1.75             | 5.96    |
| 4,000               | 2.00             | 6.52    |
| 5,000               | 2.50             | 7.58    |
| 6,000               | 3.00             | 8.56    |
| 7,000               | 3.50             | 9.49    |
| 8,000               | 4.00             | 10.4    |
| 9,000               | 4.50             | 11.2    |
| 10,000              | 5.00             | 12.0    |
| 12,000              | 6.00             | 13.6    |
| 18,000              | 9.00             | 17.9    |
| 20,000              | 10.00            | 19.2    |
| 30,000              | 15.00            | 25.2    |
| 40,000              | 20.00            | 30.5    |
| 50,000              | 25.00            | 35.4    |
| 60,000              | 30.00            | 40.0    |
| 70,000              | 35.00            | 41.3    |
| 80,000              | 40.00            | 42.5    |
| 90,000              | 45.00            | 43.6    |
| 100,000             | 50.00            | 44.6    |
| 120,000             | 60.00            | 46.3    |
| 140,000             | 70.00            | 47.8    |



| Process Weight Rate |          | Rate of Emission |
|---------------------|----------|------------------|
| Lb/Hr               | Tons/Hr  | Lb/Hr            |
| 160,000             | 80.00    | 49.0             |
| 200,000             | 100.00   | 51.2             |
| 1,000,000           | 500.00   | 69.0             |
| 2,000,000           | 1,000.00 | 77.6             |
| 6,000,000           | 3,000.00 | 92.7             |

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation

$$E = 4.10P^{0.67}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$$E = 55.0P^{0.11} - 40;$$

where:

E = rate of emission in lb/hr; and  
P = process weight rate in tons/hr.

(B) The limitations established by subsection (2)(A) shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in subsection (2)(B), Table II for that volume; provided that, for the purposes of this section, the person responsible for the emission may elect to substitute a volume determined according to the provisions of subsection (2)(C); and provided further that the burden of showing the source gas volume or other volume substituted, including all the factors which determine volume and the methods of determining and computing the volume shall be on the person seeking to come within the provisions of this section.

Table II

| Source Gas Volume, Standard Cubic Foot Per Minute | Concentration Grain Per Standard Cubic Foot |
|---|---|
| 7,000 or less                                     | 0.100                                       |
| 8,000   | 0.096                                       |
| 9,000   | 0.092                                       |
| 10,000  | 0.089                                       |
| 20,000  | 0.071                                       |
| 30,000  | 0.062                                       |
| 40,000  | 0.057                                       |
| 50,000  | 0.053                                       |
| 60,000  | 0.050                                       |
| 80,000  | 0.045                                       |
| 100,000   | 0.042                                       |
| 120,000   | 0.040                                       |
| 140,000   | 0.038                                       |

| Source Gas Volume, Standard Cubic Foot Per Minute | Concentration Grain Per Standard Cubic Foot |
|---|---|
| 160,000   | 0.036                                       |
| 180,000   | 0.035                                       |
| 200,000   | 0.034                                       |
| 300,000   | 0.030                                       |
| 400,000   | 0.027                                       |
| 500,000   | 0.025                                       |
| 600,000   | 0.024                                       |
| 800,000   | 0.021                                       |
| 1,000,000 or more                                 | 0.020                                       |

(C) Any volume of gases passing through and leaving an air pollution abatement operation may be substituted for the source gas volume of the source operation served by the air pollution abatement operation, for the purposes of subsection (2)(B), provided that air pollution abatement operation emits no more than forty percent (40%) of the weight of particulate matter entering; and provided further that the substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering the air pollution abatement operation.

(D) No person shall cause, suffer, allow or permit the emission of particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases. If provisions of this subsection would permit a greater emission of particulate matter per hour than allowed by subsection (2)(A), the provision of this subsection (2)(D) shall not apply, except that the following regulation shall apply to existing grey iron jobbing cupolas. For purposes of this regulation, a jobbing cupola is defined as a cupola which has a single melting cycle no more than ten (10) hours in any consecutive twenty-four (24) hours and no more than fifty (50) hours in any consecutive seven (7) days.

1. All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to remove eighty-five percent (85%) by weight of all the particulate matter in the cupola discharge gases or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

2. All gases, vapors and gas entrained effluents from those cupolas shall be incinerated at a temperature not less than one thousand two hundred degrees Fahrenheit (1200° F) for a period of not less than 0.3 second.

(3) Exceptions. The following exceptions to the provisions of this regulation shall be permitted:

(A) For the grinding, crushing and classifying operations at a rock quarry; and  
(B) For the receiving and shipping of whole grain from or into a railroad or truck transportation source at a grain elevator.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed June 30, 1975, effective July 10, 1975. Amended: Filed March 15, 1979, effective Nov. 11, 1979. Amended: Filed Oct. 13, 1983, effective March 12, 1984.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.060 Refuse Not to be Burned in Fuel Burning Installations**  
(Rescinded February 11, 1979)

**10 CSR 10-5.070 Open Burning Restrictions**

*PURPOSE: This rule prohibits the disposal of refuse by open burning except as provided under specified conditions.*

(1) Open Burning Restrictions.

(A) No person shall dispose of household refuse by open burning, or cause, allow or permit open burning of refuse except in areas outside of incorporated municipalities.

(B) All open burning of leaves, brush, or other vegetation shall be prohibited except in areas outside of incorporated municipalities.

(C) No person shall conduct, cause or permit the conduct of a salvage operation by open burning.

(D) No person shall cause or permit the disposal of trade wastes or tires by open burning.

(E) This regulation shall not apply to the following:

1. Fires used for recreational purposes or fires used for the noncommercial preparation of food, such as barbecuing;

2. Flares burning for the combustion of gaseous trade waste;

3. Fires set for the purpose of training fire fighters or industrial employees in fire fighting methods if the director is notified in writing twenty-four (24) hours prior to the fire training. Fire training for industrial employees shall be permitted by the fire department having jurisdiction. In the case of a local fire department accepting buildings for purposes of fire training, it is the responsibility of that fire department to assure all asbestos containing products or materials or petroleum based products or materials such

as asphalt shingles and floor or ceiling tiles are removed prior to fire training; and

4. A prescribed burning for natural resource management purposes.

(2) Definitions. Definitions of some of the terms used in this rule may be found in 10 CSR 10-6.020.

(3) Other Restrictions and Provisions.

(A) Effective April 15, 1996, open burning of household refuse shall be a violation of this rule in the entire St. Louis ozone nonattainment area.

(B) Effective April 15, 1996, the open burning of tree leaves or residential brush or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year.

(C) Piled material to be open burned under subsection (3)(B) shall be limited to a total base area not to exceed sixteen (16) square feet.

(D) Any open burning allowed under the provisions of subsections (3)(A) and (B) of this rule shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m.

(E) Open burning of vegetation for the purpose of weed and pest control or for the purpose of crop production in the course of agricultural operation is permitted. If the burning is conducted between April 15 and September 15 of each calendar year, the person conducting the burning must notify the director in writing at least forty-eight (48) hours prior to commencement of burning. The notification shall include, but not be limited to, the following: name of the person(s) conducting the burning, description of the burning, phone number, and the duration of burning. The department reserves the right to delay the burning in days when the ambient air level for ozone is high.

(F) An open burning permit may be issued by the director on yearly basis for open burning of vegetation at a solid waste processing or disposal facility provided that an air curtain destructor is utilized. The open burning permit shall not be in lieu of obtaining a construction permit, as applicable, under 10 CSR 10-6.060.

(G) Open burning of vegetation grown on the premises undergoing land clearing operations may be permitted under conditions established by the director.

(H) Any person intending to dispose of vegetation by open burning under subsection (3)(F) or (G) shall file a written request with the director. The director will evaluate the request for air quality impact to determine whether the request should be granted. The request shall state the following:

1. The name, address and telephone number of the person submitting the request;

2. The type of business or activity involved;

3. A description of the proposed open burning operations, including the type, quantity and composition of vegetation to be burned;

4. The schedule of burning operations;

5. The exact location where open burning will be conducted to dispose of vegetation;

6. Reasons why no method other than open burning can be used for disposal of vegetation; and

7. Evidence that the proposed open burning has been approved by any fire department which has jurisdiction. Upon approval of the application by the director, the person may proceed with the operation without being in violation of subsection (3)(F) or (G).

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Nov. 9, 1983, effective April 12, 1984. Amended: Filed June 30, 1994, effective Jan. 29, 1995.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

#### **10 CSR 10-5.080 Incinerators** (Rescinded December 9, 1991)

#### **10 CSR 10-5.090 Restriction of Emission of Visible Air Contaminants**

*PURPOSE: This rule specifies the maximum allowable shade or opacity of visible air contaminant emissions, unless exempt or regulated by 10 CSR 10-6.070, and requires the use of opacity monitoring devices on certain air contaminant sources.*

*PUBLISHER'S NOTE: The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.*

(1) Restrictions Applicable to All Installations.

(A) No person shall discharge into the atmosphere from any single source of emission, any air contaminant of a shade or den-

sity equal to or darker than that designated as No. 1 on the Ringelmann Chart or twenty percent (20%) opacity.

(B) This section shall not apply to existing sources, other than incinerators, which emit less than twenty-five (25) pounds per hour of particulate.

(2) Restrictions Applicable to Existing Installations, Other Than Incinerators, Which Emit Less Than Twenty-Five (25) Pounds Per Hour of Particulate.

(A) No person exempted from the provisions of section (1) shall discharge into the atmosphere from any single source of emission, any air contaminant of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart or forty percent (40%) opacity.

(B) This section shall not apply to incinerators.

(3) Exceptions.

(A) A person subject to section (1) may discharge into the atmosphere from any single source of emission for a period(s) aggregating not more than six (6) minutes in any sixty (60) minutes air contaminants of a shade or density not darker than No. 2 on the Ringelmann Chart or forty percent (40%) opacity.

(B) Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of section (1) or (2) of this regulation, that section shall not apply.

(C) The provisions of sections (1) and (2) of this regulation shall not apply to the following:

1. Transfer of molten metals;

2. Emissions from transfer ladles;

3. Coke ovens when pushing coke from oven;

4. Water quenching of coke on discharge from ovens; or

5. Existing grey iron jobbing cupolas as defined in 10 CSR 10-5.050.

(4) Method of Measurement.

(A) The Ringelmann Chart published and described in the *United States Bureau of Mines Information Circular 7718* or the *United States Public Health Service Smoke Inspection Guide* as described in the *Federal Register*, Title 42, chapter 1, subchapter F, part 75, shall be used in grading the shade or opacity of visible air contaminant emissions. The director of the Department of Natural Resources may specify other means of measurement which give comparable results or

results of greater accuracy. The two (2) publications described in this subsection are made a part of this regulation by reference.

(B) The installation of opacity monitoring devices shall be required on fluid bed catalytic cracking unit catalyst regenerators, coal-fired steam generating units with greater than two hundred fifty (250) million British Thermal Units (BTUs)/hour heat input and portland cement calcining kiln operations.

(C) Minimum Specifications.

1. Performance specifications. Continuous monitoring systems for monitoring opacity shall comply with performance specification 1 as set forth in 40 CFR part 60, Appendix B, "Performance Specification 1."

2. Cycling time. Cycling times include the total time a monitoring system requires to sample, analyze and record an emission measurement. Continuous monitoring systems for measuring opacity shall complete a minimum of one (1) cycle of operation (sampling, analyzing and data recording) for each successive ten (10)-second period.

3. Monitor location. All continuous monitoring systems or monitoring devices shall be installed so that the measurements obtained are representative measurements of emissions occurring within the discharged opacity profile.

4. Combined effluents. When the effluents from two (2) or more affected facilities of similar design and operating characteristics are combined before being released to the atmosphere, opacity monitoring systems may be installed on the combined effluent.

5. Zero and drift. The owners or operators of all continuous monitoring systems installed in accordance with the requirements of this rule shall record the zero and drift at least once daily unless the manufacturer has recommended adjustments at shorter intervals at which case those recommendations shall be followed and shall adjust the zero and span whenever the twenty-four (24)-hour zero drift or twenty-four (24)-hour calibration drift limits in 40 CFR part 60, Appendix B, "Performance Specification 1" are exceeded or whenever the twenty-four (24)-hour zero drift or twenty-four (24)-hour calibration drift exceed ten percent (10%) of the emission standard.

6. Span. Instrument span shall be approximately two hundred percent (200%) of the expected instrument data display output corresponding to the emission standard for the source.

(D) Minimum Data Requirements.

1. Written reports required. Owners or operators of facilities required to install continuous monitoring systems shall submit a written report of excess emissions for each

calendar quarter and the nature and cause of the excess emissions, if known, to the director. All quarterly reports shall be postmarked by the thirtieth day following the end of each calendar quarter.

2. Data summary. The data summary shall consist of the magnitude in actual percent opacity of all six (6)-minute averages of opacity greater than the opacity emission limitation. Average of values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of twenty-four (24) equally spaced instantaneous opacity measurements per six (6)-minute period. A one (1)-hour period means any sixty (60)-minute period commencing on the hour and a six (6)-minute period means any one (1) of ten (10) equal parts of a one (1)-hour period.

3. Inoperative periods. The date and time identifying each period during which the continuous monitoring system was inoperative (except for zero and span checks) and the nature of system repairs or adjustments shall be reported.

4. No excess emissions. When no excess emissions have occurred during the reporting period and the continuous monitoring system has not been inoperative, repaired or adjusted, this information shall be included in the report.

5. Files to be maintained. Owners or operators of affected facilities shall maintain a file of all information reported in the quarterly summaries and all other data collected either by the continuous monitoring system or as necessary to convert monitoring data to the units of the applicable standard, for a minimum of two (2) years from the date of collection of the data of submission of summaries.

(E) Special Considerations.

1. Alternatives. Alternative monitoring requirements, system locations and procedures for performing calibration checks which do not meet the requirements of this rule but adequately demonstrate a definite and consistent relationship with the intent of this rule may be approved by the director.

2. Exceptions.

A. Coal-fired steam generating units that have an annual boiler capacity factor of thirty percent (30%) or less as currently defined by the Federal Power Commission shall be exempt from these monitoring requirements.

B. Coal-fired boilers and portland cement calcining kilns scheduled for retirement prior to January 1, 1981, shall be exempt from these monitoring requirements subject to receipt and approval of an affidavit by the director.

C. Coal-fired boilers which utilize flue gas desulfurization equipment shall be exempt from these monitoring requirements.

D. Portland cement calcining kilns whose particulate emissions are controlled with baghouses which emit from multiple stacks or vents shall be exempt from these opacity monitoring requirements.

(F) Compliance.

1. Owners or operators of affected facilities shall submit a plan for meeting the requirements of this rule to the director within sixty (60) days of its effective date (October 24, 1976).

2. Notwithstanding compliance with any other provision of this rule, no owner or operator of a facility affected by this rule will be deemed to be in compliance until the compliance plan receives the written approval of the director.

3. Effective dates of compliance. Facilities affected by this rule shall comply within twelve (12) months of its effective date (March 25, 1977).

(5) Compliance Schedule. Existing installations subject to section (1), other than incinerators, shall be in compliance with section (1) by July 1, 1978. Those existing sources, except incinerators, which are subject to section (1) shall comply with the limitations of section (2) until July 1, 1978. All incinerators and new sources shall comply with section (1) on March 25, 1976.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Jan. 14, 1977, effective July 11, 1977.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.100 Preventing Particulate Matter From Becoming Airborne**  
(Rescinded September 28, 1990)

**10 CSR 10-5.110 Restrictions of Emission of Sulfur Dioxide for Use of Fuel**  
(Rescinded July 30, 1997)

*AUTHORITY: section 643.050, RSMo (1986). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Sept. 14, 1978, effective April 12, 1979. Rescinded: Filed Dec. 13, 1996, effective July 30, 1997.*

*\*Original authority 1965, amended 1972, 1992, 1993.*





**10 CSR 10-5.120 Information on Sales of Fuels to be Provided and Maintained**

*PURPOSE: This rule provides that information pertaining to the sale of coal or residual fuel oil shall be maintained and provided upon request.*

(1) Tickets to be Furnished and Retained. After thirty (30) days from the effective date of this regulation (April 24, 1976), every delivery of coal or residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer and the source of the fuel. Tickets on delivery of coal shall also show the ash content of the coal. One (1) copy of each ticket shall be kept by the person delivering the fuel and be retained for one (1) year; one (1) copy is to be given to the recipient of the fuel to be retained for one (1) year; and upon request, within thirty (30) days after delivery of the fuel, the delivering party shall mail one (1) copy to the Air Conservation Commission.

(2) Lists May Be Published. The director is authorized to publish lists of approved sources or other descriptive lists of fuels available in the area which meet the requirements of this regulation.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

*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). 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 10-5.130 Certain Coals to be Washed**

*PURPOSE: This rule provides that specified coals shall be cleaned by washing prior to their sale or use.*

(1) Certain Coals to be Washed. After December 1, 1968, it shall be unlawful for any person to import, sell, offer for sale, expose for sale, exchange, deliver or transport for use and consumption in the St. Louis metropolitan area or to use or consume in the area any coal which as mined contains in excess of two percent (2%) sulfur or twelve percent (12%) ash calculated as described in 10 CSR 10-5.110, unless it shall have been cleaned by a process known as washing so that it shall contain no more than twelve percent (12%) ash on a dry basis. The term washing is meant to include purifying, cleaning or removing impurities from coal by mechanical process, regardless of the cleaning medium used.

(2) Samples May Be Taken. The director is authorized to take or cause or to have taken samples of any coal at any reasonable time or place for purposes of determining compliance with this regulation.

(3) Exception. This regulation shall not apply if a person proposing to use unwashed coal can show that the emission of sulfur dioxide from the plant in which the coal is to be burned will not exceed two and three-tenths (2.3) pounds of sulfur dioxide per million British Thermal Units of heat input to the installation and that emission of particulate matter will be no more than that allowed in 10 CSR 10-5.030.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.140 Emission of Certain Settleable Acids and Alkaline Substances Restricted**

(Rescinded February 11, 1978)

**10 CSR 10-5.150 Emission of Certain Sulfur Compounds Restricted**

(Rescinded July 30, 1997)

*AUTHORITY: section 643.050, RSMo (1996). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Aug. 11, 1978, effective March 11, 1979.*

*Rescinded: Filed Dec. 13, 1996, effective July 30, 1997.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.160 Control of Odors in the Ambient Air**

*PURPOSE: This rule restricts the emission of excessive odorous matter.*

(1) General Provisions.

(A) No person shall emit odorous matter as to cause an objectionable odor on or adjacent to—

1. Residential, recreational, institutional, retail sales, hotel or educational premises;
2. Industrial premises when air containing odorous matter is diluted with twenty (20) or more volumes of odor-free air; or
3. Premises other than those in paragraphs (1)(A)1. and 2. when air containing odorous matter is diluted with four (4) or more volumes of odor-free air.

(B) The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when thirty percent (30%) or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy, the sample size to be at least twenty (20) people or seventy-five percent (75%) of those exposed if fewer than twenty (20) people are exposed.

(2) Exception. The provisions of this rule shall not apply to the emission of odorous matter from the raising and harvesting of crops, nor from the feeding, breeding and management of livestock or domestic animals or fowl.

*AUTHORITY: section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Aug. 15, 1983, effective Jan. 13, 1984.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.170 Control of Odors From Processing of Animal Matter**

*PURPOSE: This rule establishes methods and procedures for odor control during the processing of animal matter.*

(1) General.

(A) For purposes of this regulation the word reduction is defined as any health process, including rendering, cooking, drying,

dehydrating, digesting, evaporating and protein concentrating. Animal matter is defined as any product or derivative of animal life.

(B) The provisions of this regulation shall not apply to any device, machine, equipment or other contrivance used exclusively for the processing of food for human consumption in food service establishments.

(C) For purposes of this regulation, a food service establishment shall be defined as follows: any fixed or mobile restaurant; coffee shop; cafeteria; short order cafe; luncheonette; grill; tearoom; sandwich shop; soda fountain; tavern; bar; cocktail lounge; night club; roadside stand; industrial feeding establishment; private, public or nonprofit organization or institution routinely serving food; catering kitchen, commissary or similar place in which food or drink is placed for sale or for service on the premises or elsewhere; and any other eating or drinking establishment or operation where food is served or provided for the public with or without charge.

(2) Odor Control Equipment Required on Reduction Processes.

(A) No person shall operate or use any device, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from the facility are incinerated at a temperature of not less than twelve hundred degrees Fahrenheit (1200°F) for a period of not less than 0.3 second, or processed in a manner as determined by the director to be equally or more effective for the purpose of air pollution control.

(B) A person incinerating or processing gases, vapors or gas-entrained effluents pursuant to this rule shall provide, properly install and maintain, in good working order and in operation, devices as specified by the director for indicating temperature, pressure or other operating conditions.

(3) Other Odor Control Measures Required.

(A) Effective devices and/or measures shall be installed and operated so that no vent, exhaust pipe, blow-off pipe or opening of any kind shall discharge into the outdoor air any odorous matter, vapors, gases or dusts or any combination which create odors or other nuisances in the neighborhood of the plant.

(B) Odor-producing materials shall be stored and handled in a manner so that odors produced from the materials are confined. Accumulation of odor-producing materials resulting from spillage or other escape is prohibited.

(C) Odor-bearing gases, vapors, fumes or dusts arising from materials in process shall be confined at the point of origin so as to prevent liberation of odorous matter. Confined gases, vapors, fumes or dusts shall be treated before discharge to the atmosphere, as required in subsection (3)(A).

(4) Enclosure of Building May Be Required. Whenever dust, fumes, gases, mist, odorous matter, vapors or any combination thereof escape from a building used for processing of animal matter in a manner and amount as to cause a violation of 10 CSR 10-5.060, the director may order that the building(s) in which processing, handling and storage are done be tightly closed and ventilated in a way that all air and gases and air or gas-borne material leaving the building are treated by incineration or other effective means for removal or destruction of odorous matter or other air contaminants before discharge into the open air.

*AUTHORITY:* section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.180 Emission of Visible Air Contaminants From Internal Combustion Engine**

*PURPOSE:* This rule prohibits the emission of excessive visible air contaminants from an internal combustion engine.

(1) General Provisions.

(A) No person shall cause or permit the emission of visible air contaminants from any internal combustion engine for more than ten (10) consecutive seconds at any one (1) time.

(B) Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this regulation, the provisions of this regulation shall not apply.

*AUTHORITY:* section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.

*\*Original authority 1965, amended 1972, 1992, 1993.*

*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 the regulations and inspections would accomplish the purpose of "enforcing compliance with appli-

*cable emission standards" which are federal standards, and whether the preemption provision of 42 U.S.C.A., Section 1857f-6a, has been complied with are questions that only the appropriate federal officials can answer.*

**10 CSR 10-5.190 Approval of Planned Installations**

(Rescinded 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 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 10-5.200 Measurement of Emissions of Air Contaminants**

(Rescinded April 9, 1992)

**10 CSR 10-5.210 Submission of Emission Information**

(Rescinded November 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 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer**

*PURPOSE:* This rule restricts volatile organic compound emissions from the handling of petroleum liquids in five specific areas: petroleum storage tanks with a capacity greater than forty thousand gallons, the loading of gasoline into delivery vessels, the transfer of gasoline from delivery vessels into storage containers, gasoline delivery vessels and the refueling of motor vehicles from storage containers. This rule is required to

achieve the federally mandated reduction of hydrocarbon emissions in the St. Louis metropolitan area that contribute to the formation of ozone.

*Editor's Note: The following material is incorporated into this rule by reference:*

1) *Environmental Solutions, Inc., Performance Evaluation Test Procedures for Vapor Recovery Systems at Gasoline Dispensing Facilities* (Jefferson City, MO: Missouri Department of Natural Resources, November 1, 1995).

In accordance with section 536.031(4), RSMo, the full text of material incorporated by reference will be made available to any interested person at the Office of the Secretary of State and the headquarters of the adopting state agency.

(1) Definitions.

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

(B) Definitions Specific to This Rule.

1. CARB—California Air Resources Board, 2020 L Street, P.O. Box 2815, Sacramento, CA 95812.

2. Department—Missouri Department of Natural Resources, 205 Jefferson Street, P.O. Box 176, Jefferson City, MO 65102.

3. Director—The director of the Missouri Department of Natural Resources, or a designated representative to carry out the duties as described in 643.060 of the Missouri Air Conservation Law.

4. System—Manufacturer's application of one of the specific designs for Stage II vapor recovery.

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

6. Vapor recovery system modification—Any repair, replacement, alteration or upgrading of vapor recovery equipment or gasoline dispensing equipment beyond normal maintenance of the system as permitted by the staff director. Replacement of equipment with like equipment shall not be considered a vapor recovery system modification.

7. MO/PETP—The Missouri *Performance Evaluation Test Procedures*, a set of test procedures for evaluating performance of Stage I/II vapor control equipment and systems to be installed or that have been installed in Missouri.

(2) Applicability.

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

(B) Compliance with this rule does not relieve the owner or operator of the responsibility to comply with other applicable governmental requirements.

(3) Petroleum Storage Tanks.

(A) 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 five-tenths (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:

1. 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:

A. The storage tank is fitted with—

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

(II) 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 part (3)(A)1.A.(I) of this rule;

B. All seal closure devices meet the following requirements:

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

(II) 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

(III) 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<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per foot of tank diameter);

C. All openings in the external floating roof, except for automatic bleeder vents, rim space vents and leg sleeves, are equipped with—

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

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

D. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

E. Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and

F. Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening;

2. 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 absorber system, condensation system or equivalent vapor disposal system that processes the vapor and gases from the equipment being controlled; or

3. Other equipment or means of equal efficiency for purposes of air pollution control that may be approved by the staff director.

(B) Control equipment described in paragraph (3)(A)1. 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.

(C) Owners and operators of petroleum storage tanks subject to this section 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. The records shall be maintained for two (2) years and made available to the staff director upon request.

(D) This section shall not apply to petroleum storage tanks which—

1. 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;

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

3. 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; and

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

(4) Gasoline Loading.

(A) No owner or operator of a gasoline loading installation or delivery vessel shall cause or permit the loading of gasoline into any delivery vessel from a loading installation unless the loading installation is equipped with a vapor recovery system or equivalent. This system or system equivalent shall be approved by the staff director and the delivery vessel shall be in compliance with section (7) of this rule.

(B) 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:

1. An absorber system, condensation system 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. Each owner or operator shall comply as expeditiously as practicable but no later than December 31, 1995;
2. A vapor handling system that directs the vapor to a fuel gas system; or
3. Other equipment of an efficiency equal to or greater than paragraph (4)(B)1. or 2. of the rule if approved by the staff director.

(C) Owners or operators of loading installations shall keep complete records documenting the number of delivery vessels loaded and their owners. Records shall be kept for two (2) years and shall be made available to the staff director upon request.

(D) This section shall not apply to a loading installation 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.

1. To maintain the exemption, these installations shall submit to the staff director on the form found in subsection (14)(A) by February 1 of each year, a report stating gasoline throughput for each month of the previous calendar year.

2. Trucks purchased after December 31, 1995, shall be Stage I equipped.

3. A loading installation that fails to meet the requirements of the exemption for one (1) calendar year shall not qualify for the exemption again.

4. To maintain the exemption owners or operators shall maintain records of gasoline throughput and gasoline delivery.

5. Trucks operated by an exempt installation shall not deliver to Stage I controlled tanks unless the truck is equipped with and employs Stage I controls.

(5) Gasoline Transfer.

(A) 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 (500) gallons unless—

1. 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;

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

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

A. At least two inches (2") inside diameter;

B. At least twelve feet (12') in height; and

C. Equipped with a pressure/vacuum valve; and

4. After the effective date of this rule all coaxial systems shall be equipped with pop-peted fittings.

(B) Stationary storage tanks having a volume greater than one thousand (1000) gallons shall also be equipped with a Stage I vapor recovery system and the delivery vessels to these tanks shall be in compliance with section (7) of this rule.

1. 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.

2. The vapor recovery system shall be constructed to ensure that the vapor-tight return line is connected before gasoline can be transferred into the storage tank.

3. A delivery vessel shall be refilled only at installations complying with the provisions of section (4).

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

(C) 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 one thousand (1000) gallons unless—

1. 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 paragraph (5)(B)1;

2. The vapor hose(s) employed is no less than three inches (3") inside diameter; and

3. The product hose(s) employed is no more than four inches (4") inside diameter.

(D) The owners or operators of stationary storage tanks subject to this section shall keep records documenting the vessel owners and number of delivery vessels unloaded by each owner. Records shall be kept at the facility for two (2) years and shall be made available to the staff director upon request.

(E) The provisions of subsection (5)(B) of this rule shall not apply to transfers made to storage tanks equipped with floating roofs or their equivalent.

(F) The provisions of subsections (5)(A)—(D) of this rule shall not apply to stationary storage tanks having a capacity less than or equal to two thousand (2000) gallons used exclusively for the fueling of implements of agriculture.

(6) Refueling of Motor Vehicles.

(A) General Provisions.

1. Except as provided in sections (3)—(5) no owner or operator shall install, permit the use of or maintain any stationary gasoline tank with a capacity of more than one thousand (1000) gallons or operate a facility with a monthly throughput of greater than ten thousand (10,000) gallons of gasoline unless the storage tank(s) is equipped with—

A. A vapor recovery system that can be demonstrated to the satisfaction of the staff director based on the current MO/PETP that it is capable of—

(I) Collecting the hydrocarbon vapors and gases discharged during motor vehicle refueling;

(II) Preventing their emission into the atmosphere; and

(III) Maintaining ninety-five percent (95%) efficiency of total capture and emission reduction;

B. The MO/PETP referenced in (6)(A)1.A. shall not be required before January 1, 1998. Prior to January 1, 1998, CARB documentation of ninety-five percent (95%) efficiency on a bellows balance system shall be required; and

C. After January 1, 1999, no facility subject to this section shall employ remote vapor check valves.

2. For the purpose of section (6), no vapor recovery systems or devices shall be installed, used or maintained until they are

permitted by the director in accordance with sections (9) and/or (10) of this rule.

3. All tank gauging and sampling sites or ports, valves, breakaways, joints and disconnects on the vapor recovery systems shall be gas-tight to prevent VOC emissions except during gauging or sampling.

4. All vapor recovery systems shall be maintained in good working order in accordance with the manufacturer's specifications and with no indication of visible liquid leaks.

5. The operator of each affected facility shall post operation instructions conspicuously in the gasoline dispensing area for the system in use at each station. The instructions shall clearly describe how to fuel vehicles correctly with vapor recovery nozzles utilized at that station. The instructions shall also include a warning that repeated attempts to continue dispensing gasoline after the system has indicated that the vehicle fuel tank is full may result in spillage of gasoline.

6. The staff director shall identify and list specific defects that substantially impair the effectiveness of components or systems used for the control of gasoline vapors resulting from motor vehicle fueling operations. This ongoing list shall be used by the staff director as a basis for marking the components or systems out-of-order and shall be made available to any gasoline dispensing facilities subject to subsection (6)(A) of this rule. The list shall be made available to the facility's designated person for use in performing system maintenance.

7. Upon the staff director's identification of substantial defects in equipment or installation of a gasoline vapor control system, the system or components shall be marked "out-of-order" and no person shall use or permit the use of that system or component until those defects and all other defects have been repaired, replaced or adjusted to establish compliance. The components or system may be released into operation when the staff director has reinspected the facility; found the system and components to be in good working order; and removed the "out-of-order" notice. The staff director shall reinspect the previously marked "out-of-order" system or component and other noted defects as expeditiously as possible after notification from the operator that the repairs have been completed. In no case shall the reinspection be more than four (4) days from the operator's notification that the repairs have been completed. In those cases in which the reinspection cannot be scheduled within the required time, the owner or operator may remove "out-of-order" notice with permission of the staff director. If reinspection reveals that compliance has not been estab-

lished, the system or components shall remain tagged "out-of-order". The staff director shall conduct a second reinspection within seven (7) days from the operator's notification that repairs have been completed.

(B) Section (6) shall not apply to any stationary tank used primarily for the fueling of agricultural implements or implements of husbandry. For purposes of this section, agricultural implements and implements of husbandry shall refer to vehicles exempted from licensing requirements by the Missouri Department of Revenue.

(7) Gasoline Delivery Vessels.

(A) 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 section (4) or (5) unless delivery vessel is—

1. Tested annually to demonstrate that it will sustain a pressure change of no more than seven hundred fifty (750) pascals (three inches (3") of H<sub>2</sub>O) in five (5) minutes when pressurized to gauge pressure of four thousand five hundred (4500) pascals (eighteen inches (18") of H<sub>2</sub>O) or evacuated to a gauge pressure of fifteen hundred (1500) pascals (six inches (6") of H<sub>2</sub>O). Testing for delivery vessels that have rubber hoods shall take place in the time period of January 1 through May 30 of each year and shall be in accordance with the test procedures specified in 10 CSR 10-6.030(14)(B). Testing of delivery vessels that have aluminum hoods shall take place in the time period of January 1 through December 31 of each year and shall be in accordance with the test procedures specified in 10 CSR 10-6.030(14)(B). Upon successful completion of the leak test, the owner or operator shall obtain the completed test results signed by a representative of the testing facility. Blank forms, found in section (14), for the test results will be provided to the testing facilities by the staff director. The owner or operator shall send a copy of the signed successful test results to the staff director. The staff director, upon receipt of acceptable test results, shall issue an official sticker to the owner or operator. This sticker shall be placed on the upper left portion of the back end of the vessel. An owner or operator of a gasoline delivery vessel who can demonstrate to the satisfaction of the staff director that the vessel has passed a current annual leak test in another state shall be deemed to have satisfied the requirements of this paragraph, if the other state's leak test program requires the same gauge pressure and test procedures as specified in this paragraph and the test was conducted according to

the time schedules specified in this paragraph; and

2. Repaired by the owner or operator and retested within fifteen (15) days of testing if it does not meet the leak test criteria of subsection (7)(A) of this rule.

(B) Owners or operators of gasoline delivery vessels shall keep records of all tests and maintenance performed on the vessels for not less than (2) years and these records shall be made available to the staff director upon request.

(C) This section shall not be construed to prohibit safety valves or other devices required by governmental safety regulations.

(8) Permits Required. All facilities subject to section (6) of this rule shall meet the permitting requirements of this rule.

(A) No facility subject to section (6) shall construct or undergo vapor recovery system modification without permits obtained according to section (9) of this rule.

(B) No facility subject to section (6) of this rule shall operate without an operating permit obtained according to section (10) of this rule.

(9) Construction Permits for Vapor Recovery Systems for New Facilities and Vapor Recovery System Modification for Existing Facilities. All new gasoline refueling facilities that require Stage II vapor recovery systems shall obtain permits prior to operation according to subsection (9)(A) of this rule. Facilities shall apply for permits to test experimental technology according to subsection (9)(B) of this rule. Existing facilities that undergo vapor recovery system modification shall obtain permits according to subsection (9)(C) of this rule.

(A) Owners or operators of new gasoline refueling facilities that require Stage II equipment shall—

1. Submit an application on a form supplied by the department for a permit to construct at least sixty (60) days prior to beginning construction. The application shall include:

A. Complete diagrams and a thorough description of the planned facility;

B. Plumbing diagrams including vapor lines, vent lines, slope of return vapor lines, material of all underground, above ground and dispenser plumbing, grade of site in relation to tanks, plumbing, and dispensers;

C. Current CARB executive orders for the proposed system and/or the system components. After January 1, 1998, no facility shall be issued a construction permit unless the system that will be installed has

been demonstrated to achieve ninety-five percent (95%) efficiency according to subparagraph (6)(A)1.A.;

D. Detailed description of the storage tank(s). The storage tank(s) shall be—

(I) Type I tank(s). A Type I tank is an underground storage tank that shall be covered with not less than six inches (6") of soil and/or concrete; or

(II) Type II tank(s). A Type II tank is one that has any portion of the shell exposed to the atmosphere. A Type II tank shall be equipped with a vapor processor; and

E. Schedule of construction;

2. Obtain a construction permit prior to beginning construction. The director shall issue a construction permit or a permit rejection within thirty (30) days of receipt of the application. When an appeal is made following rejection of the application to construct, that appeal shall be filed within thirty (30) days of the notice of rejection;

3. Notify the department seven (7) calendar days prior to the anticipated completion date of underground piping and schedule a mutually acceptable inspection date. In the event that no mutually acceptable date is available, the staff director shall schedule the inspection date. The underground piping shall not be covered without visual inspection by the staff director. If defects are found, the staff director shall provide written notice of those defects;

4. Establish compliance with all rules and requirements of the department including those in Title 10 of the *Code of State Regulations*:

5. Document for the staff director that prior to the introduction of product, the tank and piping system were subjected to a construction pressurization test of not more than five pounds per square inch (5 psi) and not less than four and five-tenths pounds per square inch (4.5 psi) and maintained this pressure for not less than thirty (30) minutes;

6. Obtain staff director approval of final test methods and procedures that will be used to prove compliance;

7. Conduct and pass final leak tests and dynamic back pressure/liquid blockage tests to show compliance with department requirements. The staff director may observe the test; and

8. Obtain and maintain on-site in a prominent location the original operating permit from the director for the site and the specific vapor recovery system that was installed. The operating permit is renewable every five (5) years and shall be maintained according to section (10) of this rule.

(B) The director may approve experimental technology for a specific gasoline refueling

facility. Experimental technology may be approved for up to one (1) year for a limited number of stations under specific conditions determined by the staff director. Facilities applying for approval of experimental technology shall—

1. Submit an application for director approval at least ninety (90) days prior to beginning construction. The application shall include:

A. Complete diagrams and a thorough description of the planned facility;

B. Plumbing diagrams including vapor lines, vent lines, slope of return vapor lines, material of all underground, above ground and dispenser plumbing, grade of site in relation to tanks, plumbing, and dispensers; and

C. Standards, test data, history, and related information for the proposed system.

2. Submit to the staff director a detailed plan for the construction and operation of the system. The plan shall include a description of the planned testing and recordkeeping for the facility. The director may issue the construction permit when all conditions of the testing facility are deemed satisfactory;

3. Install monitoring equipment to prove that the vapor recovery system is leak-tight if requested by the staff director; and

4. Obtain and maintain on-site operating permit from the director for the specific innovative technology that is in operation. The permit shall specify the technology, the location and the time period the technology will be tested.

(C) Existing facilities that are subject to section (6) of this rule and undergo vapor recovery system modification shall—

1. Submit an application on a form supplied by the department for a permit to construct at least sixty (60) days prior to beginning modifications;

2. Supply any information required by the staff director for the specific facility. Such information may include, but not be limited to, plumbing diagrams, including vapor lines, vent lines, slope of vapor lines, material of all underground, above ground and dispenser plumbing, grade of site in relation to tanks, plumbing and dispensers, current CARB executive orders for the proposed system and equipment, and proof of compliance with all rules and requirements of the department including those in Title 10 of the *Code of State Regulations*;

3. Obtain a construction permit prior to beginning the modification. Continued operation during the construction requires department approval. The director shall issue a construction permit or a permit rejection within thirty (30) days of receipt of the application.

When an appeal is made following rejection of the application, that appeal shall be filed within thirty (30) days of the notice of rejection;

4. Establish a schedule for inspection and testing as required by the staff director and notify the department seven (7) calendar days prior to the anticipated completion date of underground piping and schedule a mutually acceptable inspection date. In the event that no mutually acceptable date is available, the staff director shall schedule the inspection date. The underground piping shall not be covered without visual inspection by the staff director. If defects are found, the staff director shall provide written notice of those defects;

5. Supply test results to the staff director;

6. Receive staff director approval of final test methods and procedures that will be used to prove compliance;

7. Conduct and pass final leak tests and dynamic back pressure/liquid blockage tests to show compliance with department requirements. The staff director may observe the tests; and

8. Obtain and display in a prominent location on-site the original operating permit from the director for the specific site and the specific vapor recovery system that was installed. The operating permit is renewable every five (5) years and shall be maintained according to section (10) of this rule.

(10) Operating Permits for Existing Facilities. All existing facilities subject to section (6) of this rule must apply to the director for an operating permit. The term of the initial permit shall be established by the staff director based on size and age of the facility. In order to obtain an operating permit an existing facility shall—

(A) Apply to the director for an operating permit within sixty (60) days of the date of the staff director's notice to apply. However, no facility subject to this requirement shall operate after January 1, 1999, without an operating permit;

(B) Provide documentation that the Stage II system is certified by CARB as having a vapor recovery or removal efficiency of at least ninety-five percent (95%);

(C) Conduct and pass a department-approved back pressure blockage test and a department-approved leak decay test. The owner/operator of the facility shall schedule the tests and notify the staff director of the test dates at least seven (7) days prior to the testing date. The staff director may observe the tests. The owner/operator of the facility

shall provide satisfactory test results to the staff director;

(D) Designate a person(s) who has attended a department-approved training course for the Stage II equipment that is installed at that facility. A designated person shall be available for consultation to facility personnel and to the department;

(E) Demonstrate that the facility maintains a system of recordkeeping that meets the staff director's requirements;

(F) Establish compliance with all rules and requirements of the Missouri Department of Natural Resources including those in Title 10 of the *Code of State Regulations*;

(G) Obtain and display in a prominent location on-site the original operating permit from the director for the specific site and the specific vapor recovery system installed. The operating permit is renewable after the initial department designated permit period and every five (5) years thereafter. The permit shall be maintained according to section (10) of this rule; and

(H) Renewal of Operating Permits. The operating permit is renewable on the date specified in the initial operating permit and for periods of five (5) years after the initial permit term expires. In order to renew the operating permit a facility shall—

1. Apply to the director for renewal of the operating permit ninety (90) days prior to the renewal date;

2. Demonstrate that the facility maintained all system components in good operating order during the preceding operating permit term including prompt efforts to establish compliance following "out-of-order" notices;

3. Schedule an annual staff director-approved back pressure blockage test, notify the staff director of the test date at least fourteen (14) days prior to the test date and provide documentation that the facility passed the test;

4. Schedule a staff director-approved leak decay test prior to the expiration date of the permit, notify the staff director of the test date at least fourteen (14) days prior to the test date and provide documentation that the system passed the test;

5. Maintain records according to section (11) of this rule;

6. A facility using a system that is decertified by CARB shall establish compliance with this rule within one (1) year or by the next renewal date of the operating permit whichever is longer. Failure to establish compliance will result in nonrenewal of the operating permit; and

7. After January 1, 2001, no operating permit shall be renewed without documentation that the Stage II system in use at the

facility can be demonstrated to achieve ninety-five percent (95%) efficiency as specified in (6)(A)1.A.

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

(A) Operate the vapor recovery system and the gasoline loading equipment in a manner that prevents—

1. Gauge pressure from exceeding four thousand five hundred (4500) pascals (eighteen inches (18") of H<sub>2</sub>O) in the delivery vessel;

2. A reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL), measured as propane at two point five (2.5) centimeters from all points on the perimeter of a potential leak source when measured by the method referenced in 10 CSR 10-6.030(14)(E) during loading or transfer operations; and

3. Visible liquid leaks during loading or transfer operations; and

(B) Repair and retest within fifteen (15) days, a vapor recovery system that exceeds the limits in section (11) of this rule; and

(C) Maintain records of department permits, inspection reports, enforcement documents, training certifications, gasoline deliveries, routine and unscheduled maintenance and repairs and all results of tests conducted. Records shall be kept for two (2) years and shall be available immediately to the staff director upon request.

(12) Testing and Monitoring Procedures and Reporting.

(A) Testing and monitoring procedures to determine compliance with section (7) and confirm the continuing existence of leak-tight conditions shall be according to 10 CSR 10-6.030(14)(B)1. or by any method determined by the staff director.

(B) Testing procedures to determine compliance with paragraph (4)(B)1. shall be according to 10 CSR 10-6.030(14)(A) or by any method determined by the staff director.

(C) The staff director, at any time, may monitor a facility subject to section (6) of this rule. The staff director may require a leak test, a back pressure blockage test, or may require any test or monitoring procedure in order to determine compliance with this rule.

(D) 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.

(13) Vapor Recovery Advisory Group. The St. Louis Vapor Recovery Advisory Group

shall advise the staff director on vapor recovery issues in the St. Louis nonattainment area.

(A) Composition. The advisory group will consist of one (1) representative from each of these agencies or organizations:

1. Missouri Department of Natural Resources, Air Pollution Control Program;

2. Missouri Department of Natural Resources, Hazardous Waste Program Underground Storage Tank Unit;

3. St. Louis City Air Pollution Control Agency or St. Louis County Air Pollution Control Agency;

4. Missouri Department of Agriculture, Division of Weights and Measures;

5. An organization representing petroleum marketers;

6. An organization representing petroleum equipment contractors; and

7. An organization representing oil refiners.

(B) Purpose. The St. Louis Vapor Recovery Advisory Group shall review, study and make recommendations to the staff director on vapor recovery issues. Any member of the advisory group may bring an issue to the attention of the group. The advisory group shall—

1. Review vapor recovery system components that frequently fail;

2. Review CARB certifications and decertifications of vapor recovery system components;

3. Develop modifications to established tests such as the leak decay test and the back pressure blockage test. Modified test procedures shall prove integrity of Stage I and Stage II systems but may be designed for cost and time efficiency; and

4. Review any other vapor recovery issues deemed appropriate by the staff director.

(C) Limitations. The advisory group is subject to all applicable state and federal statutes and regulations. All advisory group meetings shall comply with the Missouri Sunshine Act. The advisory group assumes no regulatory authority.

(14) Appendix A. Official Forms.

(A) Request for Exemption Form.

(B) Delivery Vessel Pressure Test Certification Application.

*AUTHORITY: section 643.050, RSMo (Supp. 1995). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Jan. 31, 1972, effective Feb. 10, 1972. Amended: Filed Aug. 25, 1972, effective Sept. 4, 1972. Amended: Filed Aug. 16, 1977, effective Feb. 11, 1978. Amended:*



*Filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Dec. 5, 1980, effective May 11, 1981. Amended: Filed Nov. 2, 1984, effective May 11, 1985. Amended: Filed Dec. 3, 1985, effective Oct. 1, 1986. Amended: Filed Oct. 4, 1988, effective March 11, 1989. Amended: Filed Nov. 27, 1989, effective May 24, 1990. Rescinded and Readopted: Filed Aug. 15, 1994, effective April 30, 1995. Amended: Filed May 15, 1995, effective Dec. 30, 1995. Amended: Filed Jan. 16, 1996, effective Sept. 30, 1996.*

*\*Original authority 1965, amended 1972, 1992, 1993, 1995.*





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
AIR POLLUTION CONTROL PROGRAM  
DELIVERY VESSEL PRESSURE TEST CERTIFICATION APPLICATION

| TRUCK IDENTIFICATION   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| COMPANY NAME   |   |   |   |   |   |   |   |
| MAILING ADDRESS  |   |   |   |   |   |   |   |
| OWNER  |   |   |   | TELEPHONE NUMBER  |   |   |   |
| OPERATOR   |   |   |   |   |   |   |   |
| DELIVERY VESSEL SERIAL NO. (OR TRUCK IF INTEGRATED UNIT):  |   |   |   | MAKE AND YEAR OF MFG.   |   |   |   |
| DELIVERY VESSEL CAPACITY   |   |   |   | NUMBER OF COMPARTMENTS  |   |   |   |
| TESTING FIRM   |   |   |   |   |   |   |   |
| NAME OF TESTING FIRM   |   |   |   |   |   |   |   |
| MAILING ADDRESS  |   |   |   |   |   |   |   |
| TELEPHONE NUMBER   |   |   |   | NAME OF TESTER  |   |   |   |
| DELIVERY VESSEL TEST   |   |   |   |   |   |   |   |
| DATE OF TEST   |   |   |   |   |   |   |   |
| CAN DELIVERY VESSEL COMPARTMENTS BE CONNECTED?<br><input type="checkbox"/> Yes <input type="checkbox"/> No    If no, each compartment must be separately tested and reported.  |   |   |   |   |   |   |   |
| METHOD OF PURGING GASOLINE VAPORS<br><input type="checkbox"/> Water <input type="checkbox"/> Steam <input type="checkbox"/> Diesel Fuel <input type="checkbox"/> Heating Fuel <input type="checkbox"/> Other (specify)   |   |   |   |   |   |   |   |
| PRESSURE SOURCE<br><input type="checkbox"/> Pump <input type="checkbox"/> Compressed Air <input type="checkbox"/> Water  |   |   |   | VACUUM SOURCE<br><input type="checkbox"/> Pump <input type="checkbox"/> Water |   |   |   |
| TEST PRESSURE (IN. OF H <sub>2</sub> O) IN COMPARTMENT   | ▶ | 1 | 2 | 3   | 4 | 5 | 6 |
| TEST VACUUM (IN. OF H <sub>2</sub> O) IN COMPARTMENT   | ▶ | 1 | 2 | 3   | 4 | 5 | 6 |
| TEST PRESSURE OF ENTIRE TANK IF COMPARTMENTS CONNECTED   |   |   |   | VACUUM  |   |   |   |
| TEST RESULTS   |   |   |   |   |   |   |   |
| PRESSURE LOSS IN 5 MINUTES IN COMPARTMENT  | ▶ | 1 | 2 | 3   | 4 | 5 | 6 |
| VACUUM LOSS IN 5 MINUTES IN COMPARTMENT  | ▶ | 1 | 2 | 3   | 4 | 5 | 6 |
| PRESSURE LOSS OF ENTIRE TANK IF COMPARTMENTS CONNECTED   |   |   |   | VACUUM LOSS   |   |   |   |
| I, THE UNDERSIGNED, CERTIFY THAT THE DELIVERY VESSEL DESCRIBED ABOVE HAS BEEN TESTED IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN REGULATION 10 CSR 10-2.260   |   |   |   |   |   |   |   |
| SIGNATURE  |   |   |   | DATE  |   |   |   |
| <p>Any delivery vessel failing the leak test described in 10 CSR 10-5.220 and 2.260 shall be required to make necessary repairs and retest successfully within 15 days.</p> <p>A copy of the latest certification must be kept in the delivery vessel at all times. One copy should also be sent to each bulk gasoline terminal in St. Louis County, St. Louis City, Franklin County, Jefferson County, St. Charles County, Clay County, Jackson County and Platte County at which the delivery vessel loads.</p> <p>This test certification application shall be returned to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.</p> |   |   |   |   |   |   |   |

MO 780-1262 (8-85) DISTRIBUTION: WHITE-AIR POLLUTION CONTROL PROGRAM; BLUE-TESTING COMPANY; PINK-DELIVERY VESSEL; CANARY-REGIONAL OFFICE OR LOCAL AGENCY



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 SECTION AIR POLLUTION CONTROL PROGRAM  
 REQUEST FOR EXEMPTION  
 STAGE 1 REQUIREMENT REGULATION 10 CSR 10-5.220, (4) - ST. LOUIS  
 10 CSR 10-2.260, (3) - KANSAS CITY  
 BULK PLANTS / "GASOLINE LOADING"

|   |  |                  |          |
|---|--|------------------|----------|
| COMPANY NAME  |  | TELEPHONE NUMBER |          |
| MAILING ADDRESS   |  |                  |          |
| CITY  |  | STATE            | ZIP CODE |
| FACILITY NAME   |  |                  |          |
| FACILITY ADDRESS  |  |                  |          |
| CITY  |  | STATE            | ZIP CODE |
| GASOLINE THROUGHPUT IN GALLONS FOR 19 _____   |  |                  |          |
| JANUARY   |  |                  |          |
| FEBRUARY  |  |                  |          |
| MARCH   |  |                  |          |
| APRIL   |  |                  |          |
| MAY   |  |                  |          |
| JUNE  |  |                  |          |
| JULY  |  |                  |          |
| AUGUST  |  |                  |          |
| SEPTEMBER   |  |                  |          |
| OCTOBER   |  |                  |          |
| NOVEMBER  |  |                  |          |
| DECEMBER  |  |                  |          |
| YEARLY TOTAL  |  |                  |          |
| MONTHLY AVERAGE   |  |                  |          |
| <p>THIS FORM MUST BE RECEIVED BY THE DIRECTOR OF THE AIR POLLUTION CONTROL PROGRAM BEFORE FEBRUARY 1ST OF EACH YEAR TO BE ELIGIBLE FOR OR TO MAINTAIN A LOW THROUGHPUT EXEMPTION.</p> <p>WITH THIS SUBMISSION I HEREBY APPLY FOR OR MAINTAIN A LOW THROUGHPUT EXEMPTION, AS PER REGULATION 10 CSR 10-5.220 (4) - ST. LOUIS OR 10CSR 10-2.260, (3) - KANSAS CITY. I ATTEST THAT ALL THE ABOVE GALLONAGES ARE TRUE AND ACCURATE. I FUTHER AFFIRM THAT ALL GASOLINE LOADING IS DONE BY SUBMERGED LOADING AND ACCORDING TO ALL AIR REGULATIONS.</p> |  |                  |          |
| COMPANY OFFICER   |  |                  | DATE     |

MO 780-1523 (12-94)

**10 CSR 10-5.230 Circumvention**  
(Rescinded September 28, 1990)**10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area**

*PURPOSE:* This rule provides that more restrictive air quality control requirements may be prescribed for areas in which the sum of particulate and/or sulfur dioxide emissions from existing and proposed sources exceed specified limits.

**(1) Areas to Which This Regulation Applies.**

(A) This regulation shall apply to areas in which there are one (1) or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two (2) miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from these sources by regulations of general application are or would be greater than two thousand (2000) tons per year or five hundred (500) pounds per hour.

(B) This regulation shall apply in areas in which there are one (1) or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two (2) miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than one thousand (1000) tons for any consecutive three (3) months or one thousand (1000) pounds per hour.

(2) Air Conservation Commission May Prescribe More Restrictive Air Quality Control Measures. In areas where this regulation applies, as specified in section (1), the Air Conservation Commission may prescribe air quality control requirements that are more restrictive and more extensive than provided in regulations of general application.

*AUTHORITY:* section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967.

\*Original authority 1965, amended 1972, 1992, 1993.

*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, regulations corresponding, through administrative procedures and injunctive relief.

**10 CSR 10-5.250 Time Schedule for Compliance**

*PURPOSE:* This rule specifies the time schedule for compliance with regulations by new and existing sources.

(1) General Provisions. Except as otherwise specified, compliance with the provisions of this regulation shall be according to the following time schedule:

(A) All new installations shall comply as of going into operation;

(B) All existing installations not in compliance as of the effective date (March 24, 1967) shall be in compliance within six (6) months of the effective date (September 24, 1967) unless the owner or person responsible for the operation of the installation shall have submitted to the director in a form and manner satisfactory to him/her a program and schedule for achieving compliance, the program and schedule to contain a date on or before which full compliance will be attained, and other information as the director may require. If approved by the director, that date will be the date on which the person shall comply. The director may require persons submitting the program to submit subsequent periodic reports on progress in achieving compliance; and

(C) All other dates notwithstanding, all existing installations in Franklin County shall be in compliance with this regulation by January 31, 1972, except for—

1. Cities having a population in the range between two thousand and ten thousand (2000—10,000) inhabitants shall be in compliance with 10 CSR 10-5.070 by September 20, 1972;

2. Cities having a population of fewer than two thousand (2000) inhabitants shall be in compliance with 10 CSR 10-5.070 by September 20, 1973; and

3. Sources emitting sulfur dioxide from the use of fuel shall be in compliance with 10 CSR 10-5.110 by January 31, 1973.

*AUTHORITY:* section 643.050, RSMo (1994). \* Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Jan. 31, 1972, effective Feb. 10, 1972.

\*Original authority 1965, amended 1972, 1992, 1993.

**10 CSR 10-5.260 Rules for Controlling Emissions During Periods of High Air Pollution Potential**

(Rescinded October 11, 1984)

*Op. Atty. Gen. No. 331, Shell (11-15-71).* The Missouri Air Conservation Commission has the authority under Chapter 203, RSMo (1969), to abate pollutant emissions on an emergency basis comparable to that available under 42 U.S.C.A., Section 1857d(k).

**10 CSR 10-5.270 Public Availability of Emission Data**

(Rescinded November 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 the information available to the public unless any such information is “confidential” as defined by section 203.050.4., RSMo (1969).

**10 CSR 10-5.280 New Source Performance Regulation**

(Rescinded 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 10-5.290 More Restrictive Emission Limitations for Particulate Matter in the South St. Louis Area**

*PURPOSE:* This rule provides for more restrictive emission limitations for an area in South St. Louis and St. Louis County which has been characterized by ambient levels of particulate and sulfur dioxide in excess of the national ambient air quality standards. The more restrictive limitations are for particulate matter and will affect the emissions from the by-product coke ovens at 526 East Catalan Street. The more restrictive fugitive particulate rule, however, will apply to all sources in the area identified in this rule.

*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. Except as otherwise provided, this rule shall apply to all sources in an area bounded as follows: Beginning at St. Louis County on the west bank of the Mississippi River approximately three thousand five hundred feet (3500') south of the confluence of the River des Peres and Mississippi River at the intersection of an extension of Rippa Street and the bank of the Mississippi River, west along Rippa Street to Broadway, north on Broadway to Vincent, west on Vincent to Gentry, northeast on Gentry to Orient, northwest on Orient to Lemay Ferry Road, northeast on Lemay Ferry Road to Bayless Avenue, northwest on Bayless Avenue to Interstate 55, northeasterly on Interstate 55 crossing the boundary between the City and County of St. Louis to Loughborough, then easterly on Loughborough to the west bank of the Mississippi River, to the point of beginning all lying within St. Louis City and St. Louis County.

(2) Restrictions Applicable to All Installations/Restriction of Emissions of Fugitive Particulate Matter.

(A) No person may cause or permit the handling, transporting or storage of any material in a manner which allows particulate matter to become airborne in quantities and concentrations that—1) it remains visible in the ambient air beyond the premises where it originates or 2) its presence may be found beyond the premises where it originates and it is larger than forty (40) microns in size. The size of the particulate matter shall be determined by microscopy or any other technique proven to be equally accurate.

(B) No person may cause or permit a building or its appurtenances, a road, a driveway, a parking lot or an open area to be constructed, used, repaired or demolished without applying all reasonable measures as may be required to prevent particulate matter from becoming airborne. The director may require a person owning, operating or otherwise in control of the building, appurtenance, road, driveway, parking lot or open area to take reasonable measures as may be necessary to prevent particulate matter from becoming airborne including, but not limited to, paving or frequent cleaning of roads, driveways and parking lots, application of dust-free surfaces, application of water and the planting and maintenance of vegetative ground cover or buffer zones.

(C) No person may emit into the ambient air from any air contaminant source fugitive emissions greater than that which would be emitted after application of all reasonably available control technologies and all reasonable maintenance of plant and equipment.

(3) Restrictions Applicable to the By-Product Coke Ovens at 526 East Catalan Street.

(A) The owner or operator shall control the visible emissions from the coke ovens so that—

1. The visible emissions from the coke side hood shall not exceed ten percent (10%) opacity, as averaged from four (4) consecutive pushes. No instantaneous visible emission from the coke side hood shall exceed forty percent (40%) opacity at any time. Compliance shall be determined in accordance with procedures specified in 10 CSR 10-6.030(9). Opacity shall be read every fifteen (15) seconds for the duration of visible emissions escaping the coke side shed from four (4) consecutive pushes;

2. No visible emissions shall occur during charging of coke ovens except for a period of one hundred (100) seconds aggregated over six (6) consecutive charges. Compliance shall be determined in accordance with procedures specified in 10 CSR 10-6.030(15);

3. No more than two percent (2%) of the operating charging hole lids have any visible emissions;

4. No more than five percent (5%) of the operating offtakes having any visible emissions;

5. No more than ten percent (10%) of the operating pusher side coke oven door areas having any visible emissions;

6. No more than five percent (5%) of the operating coke side, coke oven door areas shall have any visible emissions at any one (1) time. Compliance shall be determined in accordance to procedures specified in 10 CSR 10-6.030(18), except that the observer shall walk under the hood outside the quench car rails; and

7. The opacity from the battery stacks not exceeding twenty percent (20%).

(B) The owner or operator shall install an air pollution control device for the emissions collected from the hoods. The particulate matter emissions from the air pollution control device shall be limited to .004 grains per standard cubic foot during the pushing operation and .002 grains per standard cubic foot when the pushing of coke is not occurring. If the requirements in paragraphs (3)(A)1.-7. of this rule are not met the control device shall be operated.

(C) The owner or operator shall control the coke pushing operation by modification of the

existing hoods so they shall collect at least ninety percent (90%) of the particulate matter generated during the pushing operation.

(4) Compliance Schedule Applicable to the By-Product Coke Ovens at 526 Catalan Street.

(A) The owner or operator shall purchase and install a new larry car on the coke oven batteries which shall comply with the requirements listed in 29 CFR section 1910.1029 (1983) on the following schedule:

1. The larry car shall be delivered by January 1, 1980;

2. The larry car shall be erected by March 1, 1980; and

3. Testing and shakedown of the larry car shall be completed by June 1, 1980.

(B) The owner or operator shall purchase and install a new level bar boot which shall be designed and installed in compliance with the requirements listed in 29 CFR section 1910.1029 on the following schedule:

1. Equipment was purchased by January 11, 1978;

2. Equipment shall be delivered by December 1, 1978; and

3. Equipment shall be installed by May 1, 1979.

(C) The owner or operator shall fabricate and modify the hood on the following schedule:

1. The hood fabrication shall be completed by March 1, 1978; and

2. Hood modifications shall be completed by June 1, 1978.

(D) The control device shall be constructed, tested, operated and maintained in accordance with the following:

1. Engineering of the air pollution control device shall be completed by March 1, 1979;

2. Equipment shall be delivered by September 1, 1979;

3. Equipment shall be constructed by January 1, 1980;

4. Testing shall be completed and final compliance with this rule by April 1, 1980; and

5. Operational checks shall be performed weekly along with the necessary maintenance on the control device and related equipment necessary for operation of the control device to ensure that the control device will be fully operational when its use is required. Maintenance records of the control device and related equipment shall be kept on-site for two (2) years from date of maintenance for review by any representative of the Air Pollution Control Program.

(E) A dual row of overlapping baffles shall be installed and maintained in the quench

tower by July 31, 1985. Weekly maintenance and cleaning of the baffles shall be performed to maintain one hundred percent (100%) baffle cross-sectional area at all times. Maintenance records of the quench tower shall be kept on site for two (2) years from date of maintenance for review by any representative of the Air Pollution Control Program.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed Feb. 27, 1978, effective Dec. 11, 1978. Amended: Filed Nov. 10, 1981, effective May 13, 1982. Amended: Filed March 14, 1985, effective Aug. 26, 1985.*

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

**10 CSR 10-5.300 Control of Emissions From Solvent Metal Cleaning**

*PURPOSE: This rule specifies equipment, operating procedures and training requirements for the reduction of volatile organic compound emissions from solvent metal cleaning operations in the St. Louis metropolitan area.*

(1) Application.

(A) This rule shall apply throughout the city of St. Louis and St. Charles, St. Louis, Jefferson and Franklin Counties.

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

(C) This rule applies to all processes which use cold cleaners, open-top vapor degreasers or conveyORIZED degreasers, using nonaqueous solvents to clean and remove soils from metal surfaces.

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

(3) General Provisions.

(A) No person shall cause or allow solvent metal cleaning or degreasing operations—

1. Without adhering to operating procedures as contained in this rule and to recommendations by the equipment manufacturer;

2. Without the minimum operator and supervisor training as specified in this rule; and

3. Unless the equipment conforms to the specifications listed in this rule.

(B) The owner or operator of a solvent metal cleaning or degreasing operation shall keep monthly inventory records of solvent types and amounts purchased and solvent

consumption for a period of two (2) years. These records shall include all types and amounts of solvent containing waste material 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. The director may require further recordkeeping if necessary to adequately demonstrate compliance with this rule. All these records shall be made available to the director upon his/her request.

(4) Equipment Specifications.

(A) Cold Cleaners.

1. After September 30, 1998—

A. No owner or operator shall allow the operation of any cold cleaner using a cold cleaning solvent with a vapor pressure greater than 2.0 millimeters of Mercury (mmHg) (0.038 pounds per square inch (psi)) at twenty degrees Celsius (20°C) (sixty-eight degrees Fahrenheit (68°F)) unless the cold cleaner is used for carburetor cleaning;

B. No supplier of cold cleaning solvents shall sell or offer for sale any cold cleaning solvent with a vapor pressure greater than 2.0 mmHg (0.038 psi) at 20°C (68°F) for use within the city of St. Louis and St. Charles, St. Louis, Jefferson and Franklin Counties unless the cold cleaning solvent is used for carburetor cleaning;

C. No owner or operator shall allow the operation of any cold cleaner using a cold cleaning solvent for the purpose of carburetor cleaning with a vapor pressure greater than 7.0 mmHg (0.133 psi) at 20°C (68°F); and

D. No supplier of cold cleaning solvents shall sell or offer for sale any cold cleaning solvent for the purpose of carburetor cleaning with a vapor pressure greater than 7.0 mmHg (0.133 psi) at 20°C (68°F) for use within the city of St. Louis and St. Charles, St. Louis, Jefferson and Franklin Counties.

2. After April 1, 2001—

A. No owner or operator shall operate or allow the operation of any cold cleaner using a cold cleaning solvent with a vapor pressure greater than 1.0 mmHg (0.019 psi) at 20°C (68°F) unless the cold cleaner is used for carburetor cleaning;

B. No supplier of cold cleaning solvents shall sell or offer for sale any cold cleaning solvent with a vapor pressure greater than 1.0 mmHg (0.019 psi) at 20°C (68°F) for use within the city of St. Louis and St. Charles, St. Louis, Jefferson and Franklin Counties unless the cold cleaning solvent is used for carburetor cleaning;

C. No owner or operator shall allow the operation of any cold cleaner using a cold cleaning solvent for the purpose of carburetor cleaning with a vapor pressure greater than 5.0 mmHg (0.095 psi) at 20°C (68°F); and

D. No supplier of cold cleaning solvents shall sell or offer for sale any cold cleaning solvent for the purpose of carburetor cleaning with a vapor pressure greater than 5.0 mmHg (0.095 psi) at 20°C (68°F) for use within the city of St. Louis and St. Charles, St. Louis, Jefferson and Franklin Counties.

3. Exemptions.

A. Sales of cold cleaning solvents in quantities of five (5) gallons or less shall be exempt from the requirements of subparagraphs (4)(A)1.B., (4)(A)1.D., (4)(A)2.B. and (4)(A)2.D.

B. The cleaning of electronic components shall be exempt from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A. For purposes of this rule, electronic components means 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.

C. Solvent cleaning operations which meet the emission control requirements of 10 CSR 10-5.330, 10 CSR 10-5.340 and 10 CSR 10-5.442 shall be exempt from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A.

D. Cold cleaners using aqueous solvents shall be exempt from the requirements of subparagraphs (4)(A)1.A., (4)(A)1.C., (4)(A)2.C. and (4)(A)2.A. For the purposes of this rule an aqueous solvent shall be any solvent consisting of sixty percent (60%) or more by volume water with a flashpoint greater than 93°C and is miscible with water.

E. Cold cleaners using solvents regulated under any federal National Emission Standard for Hazardous Air Pollutants from the requirements of subparagraphs (4)(A)1.A., (4)(A)1.C., (4)(A)2.C. and (4)(A)2.A.

F. Any cold cleaner with a liquid surface area of one (1) square foot or less or a maximum capacity of one (1) gallon or less from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A.

G. The cleaning of medical and optical devices shall be exempt from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A. For the purposes of this rule a medical device is 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:

(I) It is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or

(II) It is intended to affect the structure or any function of the body; or

(III) It is defined in the *National Formulary* or the *United States Pharmacopeia*, or any supplement to them.

H. Air-tight or airless cleaning systems shall be exempt from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A. if the following requirements are met. For purposes of this rule “airless cleaning system” is a degreasing machine that is automatically operated and seals at a differential pressure of 25 torr 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. For purposes of this rule “air-tight cleaning system” is 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.

(I) The equipment is operated in accordance with the manufacturer’s specifications and operated with a door or other pressure sealing apparatus that is in place during all cleaning and drying cycles.

(II) All waste solvents are stored in properly identified and sealed containers. All associated pressure relief devices shall not allow liquid solvents to drain out.

(III) Spills during solvent transfer shall be wiped up immediately and the used wipe rags shall be stored in closed containers.

(IV) A differential pressure gauge shall be installed to indicate the sealed chamber pressure.

I. Janitorial and institutional cleaning shall be exempt from the requirements of subparagraphs (4)(A)1.A. and (4)(A)2.A.

4. 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 (4)(A)1.A., (4)(A)1.C., (4)(A)2.A. and (4)(A)2.C. This alternate method must be approved by the director.

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

6. When one (1) or more of the following conditions exist, the design of the cover shall be such that it can be easily operated with one (1) hand and without disturbing the solvent vapors in the tank. (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):

A. The solvent volatility is greater than 0.3 psi measured at one hundred degrees Fahrenheit (100°F), such as in mineral spirits;

B. The solvent is agitated; or

C. The solvent is heated.

7. Each cold cleaner shall have a drainage facility which will be internal so that parts are enclosed under the cover while draining.

8. If an internal drainage facility cannot fit into the cleaning system and the solvent volatility is less than 0.6 psi measured at 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.

9. 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.

10. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.

11. Any cold cleaner which uses a solvent that has a solvent volatility greater than 0.6 psi measured at one hundred degrees Fahrenheit (100°F) or heated above one hundred twenty degrees Fahrenheit (120°F) must use one (1) of the following control devices:

A. A freeboard ratio of at least 0.75;

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

C. 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 prior to their use.

12. Record keeping.

A. After September 30, 1998, all persons subject to the requirements of subparagraphs (4)(A)1.A., (4)(A)1.C., (4)(A)2.A., and (4)(A)2.C. of this rule shall maintain records which include for each purchase of cold cleaning solvent:

(I) The name and address of the solvent supplier;

(II) The date of purchase;

(III) The type of solvent; and

(IV) The vapor pressure of the solvent in mmHg at 20°C (68°F).

B. After September 30, 1998, all persons subject to the requirements of subparagraphs (4)(A)1.B., (4)(A)1.D., (4)(A)2.B., and (4)(A)2.D. of this rule shall maintain records which include for each sale of cold cleaning solvent:

(I) The name and address of the solvent purchaser;

(II) The date of sale;

(III) The type of solvent;

(IV) The unit volume of solvent;

(V) The total volume of solvent; and

(VI) The vapor pressure of the solvent measured in mmHg at 20°C (68°F).

C. All records required under paragraph (4)(A)12. shall be retained for two (2) years and shall be made available to the director upon request.

(B) Open-Top Vapor Degreasers.

1. 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 with one (1) hand and without disturbing the solvent vapors in the tank. 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.

2. Each open-top vapor degreaser shall be equipped with a vapor level safety thermostat with a manual reset, which shuts off the heating source when the vapor level rises above the cooling or condensing coil or equipped with an equivalent safety device approved by the director.

3. 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:

A. A freeboard ratio of at least 0.75;

B. A refrigerated chiller;

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

D. 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

E. 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.

4. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.

(C) Conveyorized Degreasers.

1. 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.

2. Each conveyorized degreaser shall have the following safety switches or equivalent safety devices approved by the director which operate if the machine malfunctions:

A. A vapor level safety thermostat with manual reset which shuts off the heating source when the vapor level rises just above the cooling or condensing coil; and

B. 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.

3. Entrances and exits shall silhouette work loads 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.

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

5. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.

6. 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:

A. A refrigerated chiller;

B. 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 a complete adsorption cycle as measured using the reference method specified at 10 CSR 10-6.030(14)(A); or

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

(5) Operating Procedures.

(A) Cold Cleaners.

1. Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir.

2. Cleaned parts shall be drained in the freeboard area for at least fifteen (15) seconds or until dripping ceases, whichever is longer.

3. Whenever a cold cleaner fails to perform within the operating parameters established for it by this rule, the unit shall be shut down immediately and secured. It shall remain shut down until trained service personnel are able to restore operation within the established parameters.

4. Solvent leaks shall be repaired immediately or the degreaser will be shut down and the leaks secured until they can be more permanently repaired.

5. Any waste material removed from a cold cleaner shall be disposed of by one (1) of the following methods or equivalent (after the director's approval) and in accordance with 10 CSR 25, as applicable:

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

B. Storage in closed containers for transfer to—

(I) A contract reclamation service;

or

(II) A disposal facility approved by the director.

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

(B) Open-Top Vapor Degreasers.

1. The cover shall be kept closed at all times except when processing work loads through the degreaser.

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

A. Parts shall be racked, if practical, to allow full drainage;

B. Parts shall be moved in and out of the degreaser at less than eleven feet (11') per minute;

C. Work load shall remain in the vapor zone at least thirty (30) seconds or until condensation ceases;

D. Pools of solvent shall be removed from cleaned parts before removing parts from the degreaser freeboard area; and

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

3. Porous or adsorbent materials such as cloth, leather, wood or rope shall not be degreased.

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

5. Spray shall never extend above vapor level.

6. Whenever an open-top vapor degreaser fails to perform within the operating

parameters established for it by this rule, the unit shall be shut down immediately and secured. It shall remain shut down until trained service personnel are able to restore operation within the established parameters.

7. Solvent leaks shall be repaired immediately or the degreaser shall be shut down and the leaks secured until they can be more permanently repaired.

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

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

10. Any waste material removed from an open-top vapor degreaser shall be disposed of by one (1) of the following methods or equivalent (after the director's approval), and in accordance with 10 CSR 25, as applicable:

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

B. Storage in closed containers for transfer to—

(I) A contract reclamation service;

or

(II) A disposal facility approved by the director.

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

(C) Conveyorized Degreasers.

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

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

A. Parts shall be racked, if practical, to allow full drainage; and

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

3. Whenever a conveyorized degreaser fails to perform within the operating parameters established for it by this rule, the unit shall be shut down immediately and secured. It shall remain shut down until trained service personnel are able to restore operation within the established parameters.

4. Solvent leaks shall be repaired immediately or the degreaser shall be shut down and the leaks secured until they can be more permanently repaired.

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

6. Covers shall be placed over entrances and exits immediately after conveyor and

exhaust are shut down and removed just before they are started up.

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

8. Any waste material removed from a conveyorized degreaser shall be disposed of by one (1) of the following methods or equivalent (after the director's approval), and in accordance with 10 CSR 25, as applicable:

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

B. Storage in closed containers for transfer to—

(I) A contract reclamation service;

or

(II) A disposal facility approved by the director.

(6) Operator and Supervisor Training.

(A) 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.

(B) The supervisor of any person who operates a solvent metal cleaning process shall receive equal or greater operational training than the operator.

(C) Refresher training shall be given to all solvent metal cleaning equipment operators at least once each twelve (12) months.

(D) A record shall be kept of solvent metal cleaning training for each employee.

(7) Effective Dates of Compliance.

(A) Owners or operators subject to this rule shall be in compliance with operating procedures and operator and supervisor training requirements as described in sections (5) and (6) of this rule no later than June 1, 1979.

(B) Owners or operators subject to this rule shall comply with equipment specifications as described in section (4) of this rule and associated equipment operating procedures by June 11, 1980.

(C) Owners or operators subject to this rule as a result of the amendment, effective March 11, 1989, shall be in compliance with operating procedures and operator and supervisor training requirements as described in sections (5) and (6) no later than September 11, 1989.

(D) Owners and operators subject to this rule as a result of the amendment shall be in compliance with equipment specifications as described in section (4) by March 11, 1989, and associated equipment operating procedures by March 11, 1990.

(8) Exceptions.

(A) Solvent metal cleaning operations using 1,1,1-trichloroethane (methyl chloro-

form) or trichlorotrifluoroethane (Refrigerant 113) will be exempt from the requirements of this rule. This exemption does not relieve the owners or operators from compliance with other applicable statutes or rules of the department.

(B) 1,1,1-trichloroethane (methyl chloroform) and trichlorotrifluoroethane (Refrigerant 113) have been implicated as having deleterious effects on stratospheric ozone and, therefore, may be subject to future rules.

*AUTHORITY: section 643.050, RSMo Supp. 1997.\* Original rule filed Nov. 14, 1978, effective June 11, 1979. Amended: Filed Oct. 4, 1988, effective March 11, 1989. Emergency amendment filed Sept. 2, 1997, effective Jan. 1, 1998, expired June 30, 1998. Amended: Filed Sept. 22, 1997, effective May 30, 1998.*

*\*Original authority 1965, amended 1972, 1992, 1993, 1995.*

#### 10 CSR 10-5.310 Liquefied Cutback Asphalt Paving Restricted

*PURPOSE: This rule restricts volatile organic compounds, emissions from cutback asphalt paving operations.*

(1) Application.

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

(B) This rule applies to producers and suppliers which use or apply liquefied cutback asphalt in paving and maintenance operations on highways, roads, parking lots and driveways.

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

(3) General. After December 31, 1982, no person may cause or permit the use or application of liquefied cutback asphalt on highways, roads, parking lots and driveways during the months of April, May, June, July, August, September and October except as permitted in section (4). This section refers to liquefied cutback asphalt which is directly applied for use in a plant-mix or road-mix.

(4) Exceptions. The use or application of liquefied cutback asphalt 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 the St. Louis metropolitan area; or

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

(5) 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 these records shall be made available to the director upon his/her request.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed Nov. 14, 1978, effective July 12, 1979. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

#### 10 CSR 10-5.320 Control of Emissions From Perchloroethylene Dry Cleaning Installations

*PURPOSE: This rule restricts the emissions of perchloroethylene from dry cleaning installations.*

(1) Application. This rule shall apply throughout St. Louis City and Jefferson, St. Charles, Franklin and St. Louis Counties.

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

(3) General. No owner or operator shall cause or allow the operation of any perchloroethylene dry cleaning installation unless the facility meets the following requirements:

(A) The entire dryer exhaust shall be vented through—

1. A carbon adsorber so that the maximum solvent concentration in the vent from the adsorber shall not exceed one hundred parts per million by volume (100 ppmv) before dilution; or

2. An equally effective control device as approved by the director;

(B) There shall be no liquid leakage from the system; and

(C) Filter and Distillation Wastes.

1. The residue from all diatomaceous earth filters shall be cooked or treated so that wastes shall not contain more than twenty-five kilograms (25 kg) (55 lbs.) of solvent per



one hundred kilograms (100 kg) (220 lbs.) of wet waste material.

2. The residue from all solvent still shall not contain more than sixty kilograms (60 kg) (132 lbs.) of solvent per one hundred kilograms (100 kg) (220 lbs.) of wet waste material.

3. Filtration cartridges shall be drained in the filter housing for twenty-four (24) hours or in other sealed container before being discarded. The drained cartridges should be dried in the dryer tumbler after draining if at all possible.

(4) Exceptions. Subsection (3)(A) of this rule shall not be applicable to installations which clean forty thousand pounds (40,000 lbs.) of clothing or less per year, coin-operated installations, installations where a control device cannot be accommodated because of inadequate space or installations where no or insufficient steam capacity is available to desorb adsorbers. The director may exclude other installations from the provisions of subsection (3)(A) of this rule if it is demonstrated that other hardships or economics justify an exclusion.

(5) Compliance Schedules.

(A) The owner or operator of a perchloroethylene dry cleaning installation subject to subsection (3)(A) of this rule must meet the applicable increments of progress in the following schedule:

1. Award contracts, issue purchase orders or otherwise order the emission control system and process equipment, before April 1, 1981;

2. Complete installation of the emission control and process equipment before March 1, 1982;

3. Achieve final compliance, determined in accordance with section (5), before April 1, 1982; and

4. In the event that equipment cannot be delivered prior to February 1, 1982, and the owner or operator placed the order prior to April 1, 1981, the final compliance date shall be sixty (60) days following delivery of the equipment.

(B) The owner or operator of a perchloroethylene dry cleaning installation subject to this rule must comply with the operational and maintenance provisions of subsections (3)(B) and (C) by April 1, 1981.

(6) Compliance Methods.

(A) Compliance with paragraph (3)(C)3. of this rule shall be determined by means of visual inspection.

(B) Compliance with subsection (3)(A) of this rule shall be determined by—

1. Means of a visual inspection; and

2. The testing method referenced in 10 CSR 10-6.030(14)(A).

(C) Compliance with subsection (3)(B) of this rule shall be determined by means of a visual inspection of the following components: hose connections, unions, couplings and valves; machine door gaskets and seatings; filter and head gasket and seatings; pumps; basetanks and storage containers; water separations; filter sludge recovery distillation units; diverter valves; saturated lint from lint basket; and cartridge filters.

(D) Compliance with paragraphs (3)(C)1. and 2. of this rule shall be determined by the testing method referenced in 10 CSR 10-6.040(8).

(7) Recordkeeping.

(A) The owner or operator shall keep daily records of visual inspections, waste material disposal and testing results of paragraph (6)(B)2. and subsection (6)(D).

(B) Records as required under subsection (7)(A) shall be retained by the owner or operator for a minimum of two (2) years. These records shall be made available to the director upon request.

*AUTHORITY: section 643.050, RSMo 1994. \* Original rule filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Nov. 10, 1981, effective May 13, 1982. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations**

*PURPOSE: This rule restricts volatile organic compounds 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 rule shall apply throughout St. Louis City and Jefferson, St. Charles, Franklin and St. Louis Counties.

(B) This rule shall apply to any installation with actual emissions of greater than two and one-half (2 1/2) tons in any calendar year after December 1, 1989, of volatile organic

compounds (VOCs) from surface coating operations covered under this rule. This includes 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, which has actual VOC emissions of greater than two and one-half (2 1/2) tons in any calendar year after December 1, 1989. Once a source is determined to exceed the applicability level of this rule, it shall remain subject to this rule even if its actual emissions drop below the applicability level.

(C) This rule is not applicable to the surface coating of the following metal parts and products:

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; and
5. The following aerospace assembly and component coating operations and materials:
  - A. Adhesion promoters;
  - B. Adhesive bonding primer;
  - C. Flight test coatings;
  - D. Space vehicles coatings;
  - E. Fuel tank coatings; and
  - F. Dry film lubricants.

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

(3) General Provisions. No person shall emit to the atmosphere any VOC from any surface coating operation in excess of the amount allowed in section (4). A surface coating operation includes an application area(s), flashoff area(s), oven(s) and any other functional area needed to complete a coating.

(4) Tables of Emission Limitations and Dates of Compliance.

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

| Operations                     | Emission Limit lbs. VOC/gal. Solids Applied | Dates of Compliance |
|--------------------------------|---|---------------------|
| Auto/light duty truck          |   |                     |
| Topcoat                        | 15.1  | 12/1/89             |
| Spray Prime or Primer Surfacer | 15.1  | 12/1/89             |

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



| Surface Coatings Operations                | Emission Limit   |  | Dates of Compliance (See Note) |
|--|--|--|--------------------------------|
|  | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) |                                |
| 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                      |  |  |                                |
| Chrysler Motor Co. (Car)                   |  |  |                                |
| Prime-Electrocoat                          | 1.2  |  | 12/31/85                       |
| Spray Prime                                | 4.2  |  | 12/31/79                       |
| Topcoat                                    | 3.4  |  | 12/31/83                       |
| Final Repair                               | 2.8  |  | 12/31/85                       |
| Miscellaneous                              | 3.9  |  | 12/31/79                       |
| Metal Parts                                | 3.0  |  | 12/31/84                       |
| Extreme Performance and Air Dried          | 2.5  |  | 12/31/85                       |
| Coatings                                   | 4.8  |  | 12/31/81                       |
| All Other Coatings                         | 3.5  |  | 12/31/82                       |
| Chrysler Motor Co. (Truck)                 | 3.0  |  | 12/31/82                       |
| Prime-Electrocoat                          | 1.2  |  | 12/31/84                       |
| Spray Prime                                | 4.4  |  | 12/31/79                       |
| Topcoat                                    | 3.4  |  | 12/31/82                       |
| Final Repair                               | 2.8  |  | 12/31/84                       |
| Miscellaneous Metal Parts—                 | 3.9  |  | 12/31/79                       |
| Extreme Performance and Air Dried Coatings | 2.5  |  | 12/31/84                       |
| All Other Coatings                         | 4.8  |  | 12/31/84                       |
| Ford Motor Company                         | 3.5  |  | 12/31/82                       |
| Prime-Electrocoat                          | 1.2  |  | 12/31/82                       |
| Spray Prime                                | 3.2  |  | 12/31/83                       |
| Topcoat                                    | 3.6  |  | 12/31/84                       |
| Final Repair                               | 4.8  |  | 12/31/84                       |
| Miscellaneous Metal Parts —                |  |  |                                |
| Extreme Performance and Air Dried Coatings | 3.5  |  | 12/31/82                       |
| All Other Coatings                         | 3.0  |  | 12/31/82                       |
| General Motors Company                     |  |  |                                |
| Cathodic Electrocoat                       | 1.2  |  | 12/31/82                       |

| Surface Coatings Operations       | Emission Limit   |  | Dates of Compliance (See Note) |
|-----------------------------------|--|--|--------------------------------|
|                                   | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) |                                |
| Primer Surfacer                   | 3.0  |  | 12/31/82                       |
| Topcoat                           | 2.8  |  | 12/31/84                       |
| Final Repair                      | 5.8  |  | 12/31/79                       |
| Miscellaneous Metal Parts—        | 5.0  |  | 12/31/81                       |
| Extreme Performance and Air Dried | 2.8  |  | 12/31/84                       |
| All Other Coatings                | 6.5  |  | 7/1/79                         |
| Final Repair                      | 4.8  |  | 12/31/84                       |

| Surface Coatings Operations   | Emission Limit   |  | Dates of Compliance (See Note) |
|---|--|--|--------------------------------|
|   | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) | lbs. VOC/gal. Coating (less water & non-VOC organic compounds) |                                |
| Coatings  | 3.5  |  | 12/31/82                       |
| All Other Coatings  | 3.0  |  | 12/31/82                       |
| Paper   | 2.9  |  | 12/31/81                       |
| Vinyl   | 3.8  |  | 12/31/81                       |
| Fabric  | 2.9  |  | 12/31/81                       |
| Coil  | 2.6  |  | 12/31/81                       |
| Can   |  |  |                                |
| 2 Piece Exterior Sheet  | 4.0  |  | 12/31/82                       |
| 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                       |
| Aerospace Assembly and Components                                   | 3.7  |  | 12/31/85                       |
| Primer  | 6.0  |  | 12/31/82                       |
| Topcoat   | 5.5  |  | 12/31/82                       |
| Maskant   | 5.0  |  | 12/31/85                       |
| Railroad Cars, Farm Implements and Machinery, and Heavy Duty Trucks | 3.0  |  | 12/31/82                       |
| Other Metal Parts   | 1.0  |  | 12/31/85                       |
| Clear Coat  | 4.3  |  | 12/31/82                       |
| Extreme Performance and Air Dried Coatings                          | 3.5  |  | 12/31/82                       |
| All Other Coatings  | 3.0  |  | 12/31/82                       |
| Plastic Parts   | 3.5  |  | 4/11/84                        |
| Mail boxes and shutters   | 3.5  |  | 4/11/85                        |

*Note: The emission limit associated with the latest compliance date for each surface coating process supersedes interim emission limits associated with earlier compliance dates. No coating operation shall have emission limits from Tables A and B that apply at the same time.*

(5) Determination of Compliance. Compliance with section (4) of this rule shall be determined by one (1) of the following methods specified in subsections (5)(A) and (B) as applicable and appropriate:

(A) For subsection (4)(A), Table A, the calculation of daily volume-weighted emission performance for automobile and light duty truck primer surfacer and topcoat operations shall be made according to procedures detailed in the United States Environmental Protection Agency (EPA) document entitled "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Truck Topcoat Operations" (U.S. EPA-450/3-88-018) dated December, 1988; and

(B) For subsection (4)(B), Table B—  
1. Compliance with the emission limits may be determined using the method referenced in 10 CSR 10-6.030(14)(C) using the one (1)-hour bake. Emission performance shall be on the basis of a daily volume-

weighted average of all coatings used in each surface coating operation as delivered to the coating applicator(s) on a coating line. The daily volume-weighted average (DAVG<sub>VW</sub>) shall be 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. coatings used (minus water and exempt solvents) in a surface coating operation; and
- N = number of coatings used in a surface coating operation;

2. Compliance with the emission limits in subsection (4)(B), Table B may be determined on a pounds of VOC per gallon of coating solids basis. The determination is made by first converting the emission limit in subsection (4)(B), Table B to pounds of VOC per gallon of coating solids as shown in the following three (3) steps:

- 1)  $\frac{\text{lbs. VOC per gallon of coating (emission limit minus water from (4)(B))}}{7.36 \text{ lbs. per gallon (average density of solvents used to originally establish the emission limit)}} = \text{fraction of VOC}$
- 2)  $1 - \frac{\text{Volume fraction of VOC}}{\text{Volume fraction of solids}} = \text{Volume fraction of solids}$
- 3)  $\frac{\text{lbs. VOC per gallon of coating (emission limit minus water from (4)(B))}}{\text{Volume fraction of solids}} = \text{lbs. VOC per gallon of coating solids}$

This value from step 3) is the new emission limit. It is equivalent to the emission limit in subsection (4)(B) on a coating solids basis. The VOC per gallon of coating solids for each coating solids used is then determined using the method referenced in 10 CSR 10-6.030(14)(C) using the one (1)-hour bake. The composite daily weighted average of pounds of VOC per gallon of coating solids as tested for in the actual coatings used is compared to the new emission limit. Source operations on a coating line using coatings with a composite actual daily weighted average value less than or equal to the new emission limit, are in compliance with this rule; or

3. Compliance with the emission limits in subsection (4)(B), Table B may be determined on a pounds of VOC per gallon of coating solids applied basis. An owner or operator may request his/her emission limit be modified to be equivalent to the emission limit in subsection (4)(B), but in emission units of pounds of VOC emitted per gallon of coating solids applied. This new emission



limit is derived by dividing the emission limit from paragraph (5)(B)2. by an appropriate value for transfer efficiency (TE) as determined by the director. Prior to this determination, the owner or operator shall demonstrate to the satisfaction of the director that an adequate, fully replicable TE test method exists for the source operation. Upon approval of the TE demonstration, the director will develop an emission limit equivalent to the applicable emission limit in subsection (4)(B).

(6) Recordkeeping.

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

1. Daily records of 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. Daily records of the type and quantity of solvents for coating, thinning, purging and equipment cleaning used;
4. All test results to determine capture and control efficiencies, TEs and coating makeup;
5. Daily records of the type and quantity of waste solvents reclaimed or discarded daily;
6. Daily records of the quantity of pieces or materials coated daily; and
7. Any additional information pertinent to determining compliance.

(B) Records such as daily production rates may be substituted for actual daily coating use measurements provided the owner submits a demonstration approved by the director that these records are adequate for the purposes of this rule.

(C) Records required under subsections (6)(A) and (B) shall be retained by the owner or operator for a minimum of two (2) years. These records shall be made available to the director upon request.

(7) Compliance Schedules.

(A) Owners or operators who were subject to this rule prior to December 1, 1989 shall be subject to the compliance dates set forth in section (4). Recordkeeping systems required of these owners or operators under section (6) shall be in place and functioning not later than April 1, 1990. All other subject owners or operators shall be in compliance and have all recordkeeping systems in place by December 1, 1990.

(B) Owners or operators subject to this rule, but operating under alternate compliance plans as allowed prior to December 1, 1989, shall submit documentation by March 1, 1990 that their controls represent compli-

ance with this rule. If the director determines that the documentation represents compliance, the director shall propose to the Missouri Air Conservation Commission subsequent rules' amendments to make those control measures enforceable. If documentation is not submitted or if the director determines the documentation does not represent compliance, the owner or operator shall comply with section (4) of this rule. All owners or operators subject to this subsection shall demonstrate compliance by December 1, 1990.

*AUTHORITY: section 643.050, RSMo 1994. \* Original rule filed Dec. 15, 1978, effective July 12, 1979. Amended: Filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Aug. 15, 1983, effective Jan. 13, 1984. Amended: Filed Dec. 13, 1983, effective Jan. 13, 1984. Rescinded and readopted: Filed June 30, 1989, effective Nov. 26, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.340 Control of Emissions From Rotogravure and Flexographic Printing Facilities**

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

(1) Application.

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

(B) This rule 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 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 rule may be found in 10 CSR 10-6.020.

(B) The definition of a term specific to this rule 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 con-

trol 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 weighted 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 recovered 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) Recordkeeping.

(A) For owners or operators using an add-on control devices(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 rule 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)(B):

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 order using low solvent technology without the use of control equipment to meet the requirements of subsection (3)(B), and for whom 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 rule 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 after this provision of the rule is effective (Aug. 5, 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 (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 manufacturers' formula specifications. At a minimum, ink testing will be required once after 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 rule 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 rule 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 1994.\* Original rule filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Nov. 10, 1981, effective May 13, 1982. Amended: Filed Oct. 4, 1988, effective March 11, 1989. Amended: Filed July 15, 1991, effective Feb. 6, 1992.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

### 10 CSR 10-5.350 Control of Emissions From Manufacture of Synthesized Pharmaceutical Products

*PURPOSE: This rule restricts volatile organic compound emissions from the manufacture of synthesized pharmaceutical products.*

(1) Application.

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

(B) This rule applies to all synthesized pharmaceutical manufacturing installations.

(C) This rule applies only to operations including reactors, distillation units, dryers, storage of volatile organic compounds (VOCs), transfer of VOC, extraction equipment, filters, crystallizers and centrifuges that individually and uncontrolled would emit fifteen pounds (15 lbs.) per day or more of VOC.

(D) This rule does not apply to operations used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance (such as research facilities, pilot plant operations and laboratories) unless—

1. The operation is an integral part of the production process; or

2. The emissions from the operation exceed three hundred sixty-three kilograms (363 kg) (eight hundred 800 lbs.) in any calendar month.

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

(3) Operating Equipment and Operating Procedure Requirements.

(A) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this rule shall control the VOC emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryers by the use of surface condensers or equivalent controls.

1. If surface condensers are used, with vapor pressures as measured at twenty degrees Celsius (20°C), the condenser outlet gas temperature must not exceed—

A. Minus twenty-five degrees Celsius (-25°C), when condensing VOC of vapor pressure greater than 40.0 kilopascals (kPa) (5.8 psi);

B. Minus fifteen degrees Celsius (-15°C), when condensing VOC of vapor pressure greater than 20.0 kPa (2.9 psi);

C. Zero degrees Celsius (0°C), when condensing VOC of vapor pressure greater than 10.0 kPa (1.5 psi);

D. Ten degrees Celsius (10°C), when condensing VOC of vapor pressure greater than 7.0 kPa (1.0 psi); or

E. Twenty-five degrees Celsius

(25°C), when condensing VOC of vapor pressure greater than 3.50 kPa (0.5 psi).

2. If equivalent controls are used, the VOC emissions must be reduced by an amount equivalent to the reductions achieved in paragraph (3)(A)1. Equivalent controls may not be used unless approved by the director.

(B) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule shall reduce the VOC emissions from all air dryers and production equipment exhaust systems—

1. By at least ninety percent (90%) if emissions are one hundred fifty (150) kg/day, three hundred thirty (330) lbs./day or more of VOC; or

2. To fifteen (15) kg/day thirty-three (33) lbs./day or less if emissions are less than one hundred fifty (150) kg/day, three hundred thirty (330) lbs./day of VOC.

(C) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule shall—

1. Provide a vapor recovery system or equivalent control that is ninety percent (90%) or more effective in reducing daily average emissions from truck or railcar deliveries to storage tanks with capacities greater than seven thousand five hundred (7500) liters (two thousand (2000) gallons) that store VOC with vapor pressures greater than 28.0 kPa (4.1 psi) at twenty degrees Celsius (20°C); and

2. Install pressure/vacuum conservation vents set at ±0.2 kPa on all storage tanks that store VOC with vapor pressures greater than 10.0 kPa (1.5 psi) at twenty degrees Celsius (20°C), unless a more effective control system is used.

(D) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule shall enclose all centrifuges, rotary vacuum filters and other filters having an exposed liquid surface, where the liquid contains VOC and exerts a total VOC vapor pressure of 3.50 kPa (0.5 psi) or more at twenty degrees Celsius (20°C).

(E) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule shall install covers on all in-process tanks containing a VOC at any time. These covers must remain closed, unless production, sampling, maintenance or inspection procedures require operator access.

(F) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule shall repair all leaks from which a liquid containing VOC can be observed running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair.

(4) Compliance Determination and Record-keeping.

(A) Compliance with this rule in subsections (3)(A) and (B) and paragraph (3)(C)1. shall be determined by the testing methods referenced in 10 CSR 10-6.030(14)(A).

(B) Owners or operators utilizing add-on control technology shall monitor and record the following parameters continuously while the affected equipment is in operation:

1. Exhaust gas temperature of all incinerators;

2. Temperature rise across a catalytic incinerator bed;

3. VOC breakthrough on a carbon adsorption unit;

4. Exit stream temperature on all condensers; and

5. Any other monitoring device requested by the director.

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

(D) Records of all information requested in subsection (4)(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) Compliance Dates.

(A) The owner or operator of a synthesized pharmaceutical manufacturing installation subject to this rule 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 rule 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 1994. \* Original rule filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.360 Control of Emissions From Polyethylene Bag Sealing Operations**

*PURPOSE: This rule reduces volatile organic compound emissions in the St. Louis metropolitan area as part of the Missouri State Implementation Plan for Ozone.*

(1) Application.

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

(B) This rule applies to all installations which have the uncontrolled potential to emit more than one hundred (100) tons per year or two hundred fifty kilograms (250 kg) per day of volatile organic compounds (VOCs) from any polyethylene bag sealing operation. This rule also shall apply to any installation which does not have an allowable VOCs 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 (250 kg) per day or one hundred (100) tons per year. The uncontrolled potential to emit is the potential emissions (as defined) plus the emissions removed by control devices.

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

(3) Emission Limits. No owner or operator shall use or permit the use of any polyethylene bag sealing operations unless the operations are equipped with a control method that will remove, destroy or prevent discharge into the ambient air a daily average of no less than sixty-five percent (65%) by weight of uncontrolled VOC emissions.

(4) Reporting and Recordkeeping.

(A) The owner or operator of a polyethylene bag sealing operation covered by this rule must maintain records consisting of the compositions and amount of sealant used, the amount and type of solvent used, the amount and type of clean-up solvent used and discarded, maintenance and repairs of air pollution control equipment, results of any emissions testing and all other information necessary to determine daily compliance with this rule. The information shall be made available to the director upon request.

(B) For owners or operators utilizing add-on control technology, the following parameters will be monitored:

1. Exhaust gas temperature of all incinerators;

2. Temperature rise across a catalytic incinerator bed;

3. VOC breakthrough on a carbon adsorption unit; and

4. Any other parameter requested by the director.

(C) Inventory 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 those records shall be made available to the director upon his/her request.

(D) For add-on control technology, compliance with this rule shall be determined by



the testing methods referenced in 10 CSR 10-6.030(14)(A).

(5) Compliance Schedules.

(A) The owner or operator of a polyethylene bag sealing operation achieving compliance with section (3) of this rule through the use of add-on control equipment must meet the applicable increments of progress in the following schedule:

1. Award contracts, issue purchase orders or otherwise order the emission control system and process equipment before April 1, 1983;

2. Complete installation of the emission control equipment before March 1, 1984; and

3. Achieve final compliance, determined in accordance with subsection (4)(D) before April 1, 1984.

(B) The owner or operator of a polyethylene bag sealing operation achieving compliance with section (3) of this rule through the use of exempted solvents must achieve—

1. A five percent (5%) reduction in emissions by March 31, 1983;

2. A thirty-five percent (35%) reduction in emissions by March 31, 1984; and

3. A final compliance by March 31, 1985.

(C) In the event that an installation utilizing exempted solvents cannot achieve the emissions reduction required in section (3) of this rule, final compliance through the use of add-on control equipment shall be no later than March 31, 1985.

(6) Seasonal Afterburner Exemption.

(A) The owner or operator of an installation who achieves compliance with this rule through the use of a natural gas-fired afterburner may discontinue operation of the afterburner for a period not longer than six (6) consecutive months beginning October 15 and ending April 15 if—

1. The afterburner is not used to control odors; and

2. The discontinuance of operation will not violate local ordinances.

(B) If, in the opinion of the director, the discontinued operation of an afterburner causes a nuisance, the afterburner shall be operated in a manner prescribed by the director.

*AUTHORITY: section 643.050, RSMo 1994. \* Original rule filed June 14, 1982, effective Nov. 11, 1982. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.370 Control of Emissions From the Application of Deadeners and Adhesives**

*PURPOSE: This rule restricts emissions of volatile organic compounds from the application of deadeners and adhesives.*

(1) Applicability.

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

(B) This rule applies to all installations which have the uncontrolled potential to emit more than one hundred (100) tons per year or two hundred fifty kilograms (250 kg) per day of volatile organic compounds (VOCs) from the application of automotive underbody deadeners and adhesives. This rule shall also apply 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. The uncontrolled potential to emit is the potential emissions (as defined) plus the emissions removed by control devices.

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

(3) General Provisions.

(A) No person shall emit to the atmosphere any VOC from the application of automotive underbody deadeners and adhesives in excess of the emission limit in section (4).

(B) The emission limit contained in section (4) shall be based on a daily weighted average of all deadeners and/or adhesives delivered to the coating applicator.

(4) Emission Limitations and Dates of Compliance.

| Application Process                 | Emission Limit<br>lb./gal.<br>Coating<br>(minus water)<br>and non-VOC<br>Organic<br>Compounds | Dates of<br>Compliance |
|-------------------------------------|---|------------------------|
| Chrysler Corp.<br>Car—<br>Deadeners | 2.22  | 7/31/85                |
| Vinyl Top<br>Adhesives              | 5.33  | 7/31/85                |

(5) Recordkeeping.

(A) The owner or operator of a deadener and/or adhesive application covered by this

rule shall keep records detailing specific VOC sources as necessary to demonstrate daily compliance. These may include daily records of the amount of deadener and/or adhesive used, the composition of deadener and/or adhesive, solvent used, solvent discarded and production levels.

(B) Records, such as daily production rates, may be substituted for actual daily used measurements provided the owner submits a demonstration approvable by the director that these records are adequate for the purpose of this rule.

(C) Records of all information required under subsections (5)(A) and (B) shall be kept for a period of not less than two (2) years and all the records shall be made available to the staff director upon request.

(6) Compliance Method. Compliance with this rule shall be demonstrated using the test method referenced at 10 CSR 10-6.030(14)(C) to determine deadener composition. The deadener manufacturer's formulation data may be used to demonstrate compliance, but only after confirmation by the test method previously referenced.

*AUTHORITY: section 643.050, RSMo 1994. \* Original rule filed Aug. 15, 1983, effective Jan. 13, 1984. Amended: Filed June 4, 1985, effective Oct. 26, 1985. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.375 Motor Vehicle Emission Inspection Waiver**

*PURPOSE: This rule complies with section 307.366.4, RSMo. It specifies the procedures and limits for receiving a waiver after failing a motor vehicle emission reinspection in the basic inspection and maintenance program as established under 11 CSR 50-2.*

(1) Applicability. This rule shall apply to all motor vehicles powered exclusively or in part by gasoline which are registered after January 1, 1997, in the counties of Franklin, St. Charles, Jefferson, St. Louis and the City of St. Louis and that have failed an emission reinspection.

(2) Issuance of a Waiver.

(A) A vehicle which has failed an emission reinspection will be issued a waiver under the following conditions:

1. A maximum of twenty (20) days has not elapsed since the original inspection, excluding Saturdays, Sundays and state holidays;

2. The subject vehicle has failed the initial emission inspection, has had repairs made appropriate to the test failure, and has failed an emission reinspection;

3. The vehicle operator shall take the vehicle to a state quality assurance/waiver facility and shall present to the department representative the emission analyzer computer generated State of Missouri Vehicle Inspection Certificate, stating that the vehicle presented has failed the initial emission inspection and all subsequent emission reinspections;

4. The vehicle operator shall present all itemized receipts of qualified repairs. The dollar value shall be sufficient to meet the limits established for the model year of the vehicle and were made between the initial inspection rejection and the reinspection rejections. Qualified repairs are those pertaining to the emissions failure only, and whose total costs are determined from itemized receipts for parts repaired/replaced and/or qualified labor costs;

5. To the extent practical, the department representative will visually verify that repairs were made and parts were repaired/replaced as claimed. A waiver affidavit/authorization will be issued by the department representative upon determination the qualified repair costs meet the established limits; and

6. The vehicle operator returns to the original safety/emission inspection station for the affixing of the emission sticker to the vehicle.

(B) The amount spent on qualifying repairs shall—

1. Not be less than seventy-five dollars (\$75) for pre-1981 model year vehicles;

2. Not be less than two hundred dollars (\$200) for 1981 and all subsequent model year vehicles;

3. Be inclusive of parts and/or labor costs paid for qualifying emission repair services, where applicable. Qualified labor costs which may be applied toward a waiver are those labor costs incurred from Missouri State Highway Patrol (MSHP) licensed inspector/mechanics. Qualified labor costs shall be applied toward a waiver. For qualifying emission repair services performed by someone other than an MSHP licensed inspector/mechanic, parts costs, but not labor costs, shall be counted toward the established waiver minimums;

4. Only include items determined to be appropriate as a possible cause of the test failure;

5. Not include the fee for an emission inspection;

6. Not include charges for obtaining a written estimate of needed repairs;

7. Not include charges for checking for the presence of emission control devices;

8. Not include costs for repairs performed on the vehicle before the initial inspection failure;

9. Not include expenses which are incurred for the repair of emission control devices which have been found to be tampered with, rendered inoperative, or removed; and

10. Not include costs for emissions repairs or adjustments covered by an automobile manufacturer's warranty, insurance policy, or contractual maintenance agreement. The emissions repair costs covered by warranty, insurance, or maintenance agreements shall be separated from other emissions repair costs and shall not be applied toward the waiver cost limitations. The operator of a vehicle within the statutory age and mileage coverage under subsection 207(b) of the federal Clean Air Act shall present from the manufacturer or authorized dealer a written denial of warranty coverage, with a complete explanation, in order for this provision to be waived.

(C) The vehicle operator shall present the original of all itemized repair receipts at the state quality assurance/waiver facility to demonstrate compliance with the qualifying dollar amount. The repair receipts shall—

1. Include the name, address, and phone number of the repair facility;

2. Describe the repairs that were performed;

3. State the labor costs (where applicable) and parts costs for each repair; and

4. Include the name (printed or typed), signature and if applicable the MSHP inspector ID number of the inspector/mechanic that performed or supervised the repair work.

*AUTHORITY: section 307.366.4, RSMo Supp. 1996.\* Original rule filed Jan. 14, 1997, effective Aug. 30, 1997.*

*\*Original authority 1983, amended 1984, 1988, 1992, 1994, 1996.*

**10 CSR 10-5.380 Motor Vehicle Emissions Inspection**

*PURPOSE: This rule enacts the provisions of sections 643.300–643.355, RSMo and meets the 1990 Clean Air Act requirement that the ozone state implementation plan contains necessary enforceable measures to upgrade the mandatory inspection and maintenance program in order to reduce vehicle emissions in the St. Louis nonattainment area.*

*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) Definitions.

(A) Definitions for key words used in this rule may be found in 10 CSR 10-6.020(2).

(B) Additional definitions specific to this rule are as follows:

1. Control chart—Statistical method of showing graphically, determining, forecasting, and maintaining performance conditions and parameters in the pursuit of appropriate quality control;

2. Department—The Department of Natural Resources;

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

4. Light Duty Truck (LDT)—Any motor vehicle rated at eight thousand five hundred pounds (8,500) GVWR or less which has a vehicle curb weight of six thousand pounds (6,000) or less and which has a basic vehicle frontal area of forty-five (45) square feet or less, which is: designed primarily for purposes of transportation of property or is a derivation of such a vehicle; or designed primarily for transportation of persons and has a capacity of more than twelve (12) persons; or available with special features enabling off-street or off-highway operation and use;

5. Light Duty Vehicle (LDV)—A passenger car or passenger car derivative capable of seating twelve (12) passengers or less;

6. Recognized repair technician—any person who—

A. Is professionally engaged in vehicle repair or employed by an ongoing business whose purpose is vehicle repair;

B. Has valid certifications in National Institute for Automotive Service Excellence (ASE) Electrical Systems (A6), Engine Performance (A8), and Advanced Engine Performance Specialist (L1); and

C. Has satisfactorily completed an independent or vehicle manufacturer's training course, approved by the department, or has passed a nationally-recognized test, approved by the department, which course or test covers the emissions tests given, diagnosis of the causes for failures, and repair work most frequently done for vehicles failing the transient emission test;

7. Steady state emission test—an engine exhaust emissions test in which the engine of

a vehicle remains at a relatively uniform number of revolutions per minute;

8. Tier 1—new gaseous, particulate tailpipe, and emission standards established by United States Environmental Protection Agency (EPA) for use in certifying new light duty vehicles and light duty trucks phased in beginning with the 1994 model year;

9. Transient emission test—an engine exhaust emissions test in which the engine of a vehicle is put under changing load requirements intended to simulate actual driving conditions;

10. Unsafe condition—the mechanical and physical condition of a motor vehicle which an emissions inspector believes has the potential to cause harm to persons or property during the course of an emissions inspection;

11. Initial inspection—An inspection consisting of the test series that occurs the first time a vehicle is inspected in an inspection cycle. The required test fee is typically collected upon an initial inspection; and

12. Qualifying repair—Any repair or adjustment performed on a vehicle's emission control system after failing an emissions inspection, that is appropriate to the test failure. Qualifying repairs shall include the repair or adjustment of emission control devices such that the requirements of parts (3)(H)1.B.(IV)–(3)(H)1.B.(XI) are satisfied.

(2) Applicability.

(A) Except as provided in subsection (2)(B), subject vehicles include all vehicles operated on public roadways in the geographical area containing the City of St. Louis and the counties of St. Louis, St. Charles, and Jefferson and which are:

1. Registered in the area with the state of Missouri Department of Revenue; or

2. Leased, rented, or privately owned and are not registered in the geographical area and are primarily operated in the area; or

3. Owned or leased by federal, state, or local government agencies, and are primarily operated in the geographical area, and are not required to be registered by the state of Missouri; or

4. Owned, leased, or operated by civilian and military personnel on federal installations located within the geographical area, regardless of where the vehicles are registered.

(B) The following vehicles are exempt from this rule:

1. Model year vehicles prior to 1971;

2. Motor vehicles with a manufacturer's GVWR in excess of eight thousand five hundred (8,500) pounds;

3. Diesel powered vehicles;

4. Hydrogen powered vehicles;

5. Electrically powered vehicles;

6. Alternate-fueled vehicles without test procedures established by federal regulation;

7. Motorcycles and motortricycles;

8. New and unused motor vehicles, of model years of the current calendar year and of any calendar year within two (2) years of such calendar year, which have an odometer reading of less than six thousand (6000) miles at the time of original sale by a motor vehicle manufacturer or licensed motor vehicle dealer to the first user;

9. Motor vehicles registered in the applicable area covered by this section which are domiciled and operated exclusively in an area of the state not subject to the provisions of this section for a period covering the next twenty-four (24) months. The owner of the vehicle shall present the director a sworn affidavit that the vehicle will be based and operated outside the covered area;

10. Tactical military vehicles; and

11. Visitor, employee, or military personnel vehicles on federal installations provided appointments do not exceed sixty (60) calendar days per calendar year.

(3) General Requirements.

(A) Compliance.

1. Compliance with emission standards. Motor vehicles subject to this rule shall demonstrate compliance with emission standards in this rule. Such demonstration shall be made through the testing procedures and be completed on the schedule specified in this rule. Completion of the scheduled demonstration is necessary for vehicle initial registration, registration renewal, or registration transfer. Failure to complete a scheduled vehicle emission inspection before registration shall be a violation of this rule and these violations are subject to penalties specified in section 643.355, RSMo.

2. Proof of compliance. Federal, state, and local government agencies shall provide documentation of proof of compliance with this section to the department. The agencies shall use the following methods to establish proof of compliance:

A. Present a list on a quarterly basis of all vehicles owned by the agency or operated by agency personnel subject to this section;

B. Provide department inspection personnel access to vehicle parking lots, garages, and areas otherwise used to store vehicles in order to examine vehicles for the presence of emission inspection stickers. All federal agencies shall ensure employee and military personnel vehicles meet the requirements of this subsection; and

C. All subject vehicles owned by federal, state and local governments shall be emission inspected within the first twenty-four (24) months of the effective date of the enhanced inspection and maintenance program in compliance with the model year requirement.

(B) Vehicle Emission Inspection Interval. Vehicles subject to this rule, manufactured as an odd-numbered model year vehicle are required to be inspected and approved by the emission inspection program in each odd-numbered calendar year and a subject vehicle manufactured as an even-numbered model year vehicle is required to be inspected and approved by the emission inspection program in each even-numbered calendar year. At the time of registration transfer, vehicles are required to be inspected and approved by the emission inspection program, regardless of the vehicle model year.

(C) Emission Inspection Period. An emission inspection performed on a subject vehicle is valid, for the purposes of obtaining registration or registration renewal, for a period of sixty (60) days.

(D) Fleets.

1. Fleet test facilities. Vehicle fleets of five hundred (500) vehicles or greater may be officially inspected outside of the centralized emission inspection stations designated for the general public, if the fleet test facilities are approved by the department. Vehicle fleets using such fleet testing facilities shall be subject to the same test requirements and quality control standards as nonfleet vehicles. Owners or operators of such vehicle fleets shall use the state contractor to conduct the emission inspection tests. Owners or operators may make repairs to fleet vehicles on site. Fleet test facilities shall be subject to at least as stringent quality assurance evaluations as public inspection stations.

2. Vehicle fleets less than five hundred (500). Vehicle fleets of ten (10) vehicles or greater shall be given special consideration at public test facilities. The department shall require operators of emission inspection test facilities to accommodate fleets with special hours, scheduling appointments during hours not open to the public, and providing a voucher payment system.

(E) Emission Inspection Prerequisites. The following prerequisites shall be accomplished by the vehicle owner or driver prior to the emission inspection:

1. The vehicle owner or driver shall pay the required test fee, established at the time of contractor selection, to the centralized emission inspection station. This fee shall also include free reinspections, provided the vehicle owner or driver complies with all



reinspection requirements as required in subsection (3)(G) of this rule, and the reinspections are conducted within thirty (30) days of the initial inspection. The required test fee shall be reduced on days of operation, other than the last three (3) days of operation in each calendar month, by an amount proportional to the time that the vehicle owner or driver is required to wait before the inspection begins.

A. If the wait time is greater than fifteen (15) minutes, the fee shall be reduced by five dollars (\$5).

B. If the wait time is greater than thirty (30) minutes, the fee shall be reduced by ten dollars (\$10).

C. If the wait time is greater than one (1) hour, the fee shall be reduced by twenty dollars (\$20);

2. If a subject vehicle is targeted for a voluntary or mandatory manufacturer's emission recall notice issued after July 1, 1995, the vehicle owner or operator shall present to the emission inspection station proof of compliance with the recall notice; and

3. Vehicles shall not be tested if all or part of the exhaust system is missing, leaking, or if the vehicle is in an unsafe condition.

(F) Vehicle Inspection Process. The emission inspection shall consist of emission tests and functional tests which shall be subject to the following requirements:

1. Upon entering the inspection station queuing area and prior to inspection commencement, the vehicle owner or driver shall be presented a time card for the verification of arrival time and wait time;

2. The vehicle owner or driver shall have access to an area in the inspection station that permits observation of the entire official inspection procedure of the vehicle tested. This access may be limited, but it shall not prevent observation;

3. Vehicles shall be tested in as-received condition. An official test, once initiated, shall be performed in its entirety regardless of immediate outcome, except in the case of an invalid test condition, unsafe conditions, or test completion via fast pass algorithms;

4. The initial inspection shall be performed without repair or adjustment at the emission inspection station prior to commencement of any tests, except as provided for in the evaporative system pressure and purge tests. Emission inspections performed after the initial inspection in an inspection cycle shall be considered a reinspection and are subject to provisions of subsection (3)(G);

5. If a subject vehicle passes all emission inspection requirements within a complete inspection cycle, the emission inspection station shall issue the vehicle owner or driver an emission inspection certificate of

compliance certifying that the vehicle has passed the emission inspection, and place an emission inspection sticker on the windshield of the subject vehicle. The positioning of the sticker on the windshield of the vehicle shall take place on the premises of the emission inspection station; and

6. If a subject vehicle fails any phase of the emission inspection requirements, the emission inspection station shall provide the vehicle owner or driver with an emission inspection test report indicating which phase(s) of the emission inspection that the vehicle failed, a list of repair facilities employing at least one (1) recognized repair technician, a repair data sheet, and a copy of the customer complaint procedure;

7. If a subject vehicle fails any phase of the emission inspection, the vehicle owner must have the vehicle repaired and complete a repair data sheet before submitting the vehicle for reinspection; and

8. If the subject vehicle fails a reinspection, the vehicle owner can apply for a compliance waiver. If all waiver requirements as prescribed in subsection (3)(H) are met, a waiver shall be issued by the department or department representative at the emission inspection station.

(G) Reinspection.

1. Reinspection procedure. Vehicles that fail any phase of the initial inspection or a reinspection shall be reinspected after repairs, to determine if the repairs were effective for correcting failures on the previous inspection. To the extent that repairs correct a previous failure could lead to failure of another portion of the inspection, that portion shall also be retested. Evaporative system repairs performed as a result of a vehicle failing either the evaporative system purge or pressure test will be cause for a complete reinspection covering all the initial inspection requirements. The reinspection shall be performed without repair or adjustment at the emission inspection station prior to tests, except as provided for in the evaporative system pressure and purge tests. All vehicles that require a reinspection are required to receive a visual emission control device inspection.

2. Repair data sheet. For a reinspection, the vehicle owner or driver must present the previous emission inspection test results report and the completed repair data sheet to the inspection station. Whether repairs were performed by the owner, a recognized repair technician, or someone other than a recognized repair technician, the repair data sheet must be completed and presented to the appropriate official at the emission inspection station.

3. Reinspection fees. The vehicle owner or driver shall present the emission inspection test report and the completed repair data

sheet to the emission transportation station within thirty (30) calendar days of the initial emission inspection, to qualify for free reinspections. Reinspections after the thirty (30)-day period shall only be performed upon payment of the full emission inspection test fee to the emission inspection station.

(H) Issuance of a Waiver.

1. The department or a department representative at the emission inspection station shall issue an emission inspection certificate of compliance, with an indicator to show that the vehicle has received a waiver to the vehicle owner or driver, and an emissions inspection sticker shall be affixed to the subject vehicle provided the following waiver requirements are met:

A. The subject vehicle has failed the initial emission inspection, and has failed a reinspection(s) after all qualifying repairs have been completed. As prescribed in paragraph (3)(G)2., a completed repair data sheet for the failed initial inspection and for all failed reinspections in the applicable inspection cycle must also be presented to the appropriate official at the emission inspection station when applying for a waiver;

B. The amount spent on qualifying repairs shall—

(I) Exceed seventy-five dollars (\$75) for pre-1981 model year vehicles;

(II) Exceed two hundred dollars (\$200) for 1981 to 1996 model year vehicles;

(III) Exceed four hundred fifty dollars (\$450) for 1997 and later model year vehicles;

(IV) Include parts costs and labor costs paid for qualifying emission repair services performed on the vehicle if paid by the vehicle owner and if the qualifying repairs were performed or supervised by a recognized repair technician as prescribed in part (3)(H)1.C.(IV). For qualifying emission repair services performed by someone other than a recognized repair technician, parts costs, but not labor costs, shall be counted toward the minimum cost to qualify for a waiver;

(V) Be appropriate to the test failure;

(VI) Not include expenses which are incurred for the repair of emission control devices which have been found to be tampered with, rendered inoperative, or removed;

(VII) Not include costs for emissions repairs or adjustments covered by an automobile manufacturer's warranty, insurance policy, or contractual maintenance agreement. The emissions repair costs covered by warranty, insurance, or maintenance



agreements shall be separated from other emissions repair costs and shall not be applied toward the waiver cost limitations. The operator of a vehicle within the statutory age and mileage coverage under subsection 207(b) of the federal Clean Air Act shall present a written denial of warranty coverage, with a complete explanation, from the manufacturer or authorized dealer in order for this provision to be waived;

(VIII) Not include the fee for an emission inspection;

(IX) Not include charges for obtaining a written estimate of needed repairs;

(X) Not include charges for checking for the presence of emission control devices; and

(XI) Not include costs for repairs performed on the vehicle before the initial inspection failure;

C. The vehicle owner or driver shall present the original of all repair receipts at the inspection station to demonstrate compliance with the qualifying dollar amount. The department or a department representative issuing a waiver shall verify emission-related repairs by visually inspecting the vehicle and reviewing repair receipts. The receipts shall—

(I) Include the name, address, and phone number of the repair facility;

(II) Describe the repairs that were performed;

(III) State the labor costs (where applicable) and parts costs for each repair; and

(IV) Include the name (printed or typed) and signature of the recognized repair technician that performed or supervised the repair work (where applicable); and

D. The vehicle owner or driver shall present a completed, signed affidavit which is adopted here by reference (see attached form, MO 780-1486) to the department or department representative at the emission inspection station indicating the costs of repairs and stating that the repairs were made in an attempt to meet the appropriate emission standards.

2. The department shall issue an emission inspection certificate of compliance, with an indicator to show that the vehicle has received a waiver to the vehicle owner or driver and an emissions inspection sticker shall be affixed to the subject vehicle provided the vehicle owner or driver presents a completed, signed affidavit to the department indicating that the vehicle will be operated exclusively in an area outside of the inspection area for a period of at least the next twenty-four (24) months.

3. The department shall issue an emission inspection certificate of compliance with an indicator to show that the vehicle has received a waiver to the vehicle owner or driver and an emissions inspection sticker shall be affixed to the subject vehicle provided the vehicle owner or driver presents proof, acceptable to the department, that the subject vehicle has successfully passed an emission inspection of another state within the previous twelve (12) months which has been deemed equivalent to Missouri's emission inspection by the commission.

(I) Vehicle Registration. After a subject vehicle has passed the emission inspection or received a waiver, the emission inspection certificate of compliance issued by the emission inspection station shall be submitted with registration documents by the vehicle owner or representative to the Missouri Department of Revenue at the time of vehicle registration.

(J) The department will purchase Missouri Analyzer System emission inspection equipment, as defined by 11 CSR 50-2.401 through 11 CSR 50-2.407, within twelve (12) months of implementation of an emission inspection program under sections 643.300 through 643.355, RSMo. The emission inspection equipment shall be fully functional, maintained according to all applicable manufacturer's specifications and procedures and in use, as verified by department audit records. The department shall select an independent appraiser to determine the current market value of the emission inspection equipment. If any person has a lease entered into prior to January 1, 1992, the department will take possession of such equipment and assume all payment obligations if such obligations are not in excess of one hundred and twenty-five percent (125%) of current market value as determined by the independent appraiser.

(K) Violations and Penalties. Persons violating this rule shall be subject to penalties contained in section 643.355, RSMo.

(4) Emission Standards. Subject vehicles shall fail the steady-state (idle test) or the transient emission test if they exceed the following measured emission values:

(A) Idle test standards for light duty vehicles and trucks less than eight thousand five hundred (8,500 lbs.) pounds GVWR.

| Model Year | CO% | HC (PPM) |
|------------|-----|----------|
| 1971—1974  | 7.0 | 700      |
| 1975—1979  | 6.0 | 600      |
| 1980       | 3.0 | 300      |

(B) Maximum exhaust dilution will be measured as no less than six percent (6%)

carbon monoxide (CO) plus carbon dioxide (CO<sub>2</sub>) by volume on vehicles subject to a steady-state test as described in July 1996, Title 40 CFR part 51, subchapter S, Appendix B, which is adopted by reference;

(C) Phase-in Transient Emission Test Standards. For transient emission inspection tests performed through the first twenty-four (24) months after the effective date of the enhanced inspection and maintenance program, the following test standards, measured in grams per mile (gpm), apply to all subject vehicles:

1. Light duty vehicles.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1982          | 2.0      | 60       | 3.0                   |
| 1983—1990          | 2.0      | 30       | 3.0                   |
| 1991—1993          | 1.2      | 20       | 2.5                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 1.2      | 20       | 2.5                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 0.8      | 15       | 2.0                   |

2. Light duty trucks less than six thousand (6,000 lbs.) pounds GVWR.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1983          | 7.5      | 100      | 7.0                   |
| 1984—1987          | 3.2      | 80       | 7.0                   |
| 1988—1990          | 3.2      | 80       | 3.5                   |
| 1991—1993          | 2.4      | 60       | 3.0                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 2.4      | 60       | 3.0                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 0.8      | 15       | 2.0                   |

3. Light duty trucks greater than six thousand (6,000) pounds GVWR but less than eight thousand five hundred (8,500) pounds GVWR.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1983          | 7.5      | 100      | 7.0                   |
| 1984—1987          | 3.2      | 80       | 7.0                   |
| 1988—1990          | 3.2      | 80       | 5.0                   |
| 1991—1993          | 2.4      | 60       | 4.5                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 2.4      | 60       | 4.5                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 1.0      | 20       | 2.5                   |

(D) Permanent Transient Test Emission Standards. For transient emission tests performed after the first twenty-four (24) months of implementation of the program, the following test standards apply to all subject vehicles:

1. Light duty vehicles.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1982          | 0.8      | 30       | 2.0                   |
| 1983—1993          | 0.8      | 15       | 2.0                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 0.8      | 15       | 2.0                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 0.6      | 10       | 1.5                   |

2. Light duty trucks less than six thousand (6,000) pounds GVWR.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1983          | 3.4      | 70       | 4.5                   |
| 1984—1987          | 1.6      | 40       | 4.5                   |
| 1988—1993          | 1.6      | 40       | 2.5                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 1.6      | 40       | 2.5                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 0.6      | 10       | 1.5                   |

3. Light duty trucks greater than six thousand (6,000) pounds GVWR but less than eight thousand five hundred (8,500) pounds GVWR.

| Model Year         | HC (GPM) | CO (GPM) | NO <sub>x</sub> (GPM) |
|--------------------|----------|----------|-----------------------|
| 1981—1983          | 3.4      | 70       | 4.5                   |
| 1984—1987          | 1.6      | 40       | 4.5                   |
| 1988—1993          | 1.6      | 40       | 3.5                   |
| Non-Tier I Vehicle |          |          |                       |
| 1994—1995          | 1.6      | 40       | 3.5                   |
| Tier I Vehicle     |          |          |                       |
| 1994 and Newer     | 0.8      | 13       | 1.8                   |

(E) Vehicles registered by the Department of Revenue as specially constructed vehicles shall be subject to emission standards applicable to the U.S. EPA certified engine configuration with which the vehicle is equipped.

(5) Test Procedures.

(A) Idle Testing. Idle tests shall be performed on pre-1981 model year subject vehicles in accordance with the procedures contained in July 1996, Title 40 CFR part 51, subpart S, Appendix B, paragraph (I), which is adopted by reference, except that the appropriate measured emission values shall be as specified in subsection (4)(A).

(B) Transient Emission Test. Transient emission tests shall be performed on 1981 and newer model year subject vehicles in accordance with the procedures contained in July 1996, Title 40 CFR part 85, subchapter W, which is adopted by reference. The driving cycle shall include acceleration, deceleration, and idle operating modes as specified in July 1996, Title 40 CFR part 51, subpart S, Appendix E, which is adopted by reference. The two hundred forty (240)-second

sequence may end earlier using fast pass algorithms and multiple pass/fail algorithms may be used during the test cycle to eliminate false failures. Vehicles failing by two (2) times, or less, the standard applicable to the vehicle will be retested immediately and the results of the first test disregarded. The transient test procedure, including algorithms and other procedural details, must be approved by EPA prior to use in Missouri's inspection and maintenance program. If vehicles cannot be tested on standard transient test equipment because of vehicle design or equipment limitations, the vehicle will be tested by an alternative method approved by the department. This method will have as near the stringency and the emission standards of the transient test, as practical. The director shall determine the number and distribution of lanes necessary to test four (4)-wheel drive vehicles.

(C) Visual Emission Control Device Inspection. Visual emission control device inspections shall be performed on 1971 and newer model year subject vehicles. Vehicles that meet the emission standards, and successfully pass the evaporative system purge and pressure test, if applicable, shall be excluded from meeting the requirements of the visual emission control device inspection as part of an initial inspection only. The visual emission control device inspection procedure shall be as follows:

1. Vehicle emission control device inspections shall be performed through direct observation or through indirect observation using a mirror, video camera or other visual aid. Visual inspection shall include the positive crankcase ventilation valve on all 1971 model year vehicles, the exhaust gas recirculation valve on all 1972 and newer model year vehicles, and the catalyst and fuel inlet restrictor on all 1984 and newer model year vehicles;

2. Vehicles shall fail the visual inspections of emission control devices if such devices are part of the original certified configuration of the vehicle and are found to be missing, modified, disconnected, or improperly connected; and

3. Vehicles shall fail visual inspections of emission control devices if these devices are found to be incorrect for the certified vehicle configuration. Aftermarket parts, as well as original equipment manufacturer parts, may be considered correct if they are proper for the certified vehicle configuration. Where EPA aftermarket approval or a self-certification program exists for a particular class of subject parts, vehicles shall fail visual equipment inspections if the part is not from an original equipment manufacturer or

from an approved or self-certified aftermarket manufacturer.

(D) Evaporative System Purge Test. The department will approve an Evaporative System Purge Test when a nonintrusive procedure becomes available and is approved by the EPA. All 1981 and newer model year subject vehicles will be tested and required to meet the standards when the procedure is approved.

(E) Evaporate System Pressure Test. Until such time as the department approves an Evaporative System Purge Test that is more comprehensive, nonintrusive, and is approved by the EPA, the evaporative system pressure test procedure shall be as follows:

1. A gas cap test, done to the extent practical, shall be performed on all 1981 and newer model year subject vehicles;

2. The gas cap test sequence shall consist of the following steps:

A. The gas cap will be connected to the adapter of the test equipment;

B. The gas cap shall be pressurized with air to 30 ± 0.5 inches of water;

C. The gas cap leak rate shall be compared to an orifice with a flow rate of sixty (60) cubic centimeters per minute at thirty inches (30") of water;

3. Vehicles fail the gas cap test if the gas cap cannot maintain a flow rate of sixty (60) cubic centimeters per minute or less; and

4. A visual inspection of the evaporative emission system shall also be performed, where practical. Vehicles fail the visual inspection of the evaporative emission system if the canister is missing or obviously damaged, if the hoses are missing, damaged or obviously disconnected, or if the gas cap is missing.

(F) On-Board Diagnostic (OBD) Test Procedures. *(Reserved)*

(6) Emission Test Equipment.

(A) Performance Features of Emission Test Equipment. Computerized test systems are required for performing any measurement on subject vehicles. The test equipment shall be certified to meet EPA requirements, including those contained in July 1996, Title 40 CFR part 51, subpart S, Appendix D, which is adopted by reference. Newly acquired systems shall be subjected to acceptance test procedures to ensure compliance with program specifications.

1. Emission test equipment shall be capable of testing all subject vehicles and will be updated as needed to accommodate new technology vehicles as well as changes to the program.

2. At a minimum, emission test equipment shall be—

A. Automated to the highest degree commercially available to minimize the potential for intentional fraud and/or human error;

B. Secure from tampering and/or abuse;

C. Based upon written specifications; and

D. Capable of simultaneously sampling dual exhaust vehicles.

(B) Functional Characteristics of Computerized Test Systems. The test system is composed of emission measurement devices and other motor vehicle test equipment controlled by a computer.

1. The test system shall automatically—

A. Make pass/fail decisions for all measurements;

B. Record test data to an electronic medium;

C. Conduct regular self-testing of recording accuracy;

D. Perform electrical calibration and system integrity checks before each test, as applicable; and

E. Initiate system lockouts for—

(I) Tampering with security aspects of the test system;

(II) Failing to conduct or pass periodic calibration or leak checks;

(III) Failing to conduct or pass the constant volume sampler flow rate check;

(IV) Failing to conduct or pass any of the dynamometer checks, including coast-down, roll speed and roll distance, power absorption capability, and inertia weight selection checks;

(V) Failing to conduct or pass the pressure monitoring device check;

(VI) Failing to conduct or pass the purge flow metering system check; and

(VII) A full data recording medium or one that does not pass a cyclical redundancy check.

2. Test systems shall include a data link to the department computer as specified in the contract between the department and the contractor(s).

3. The test system will ensure accurate data collection by limiting, cross-checking, and/or confirming manual data entry.

(C) Test Systems for Transient Emission Tests. Test equipment for transient emission testing shall meet standards specified by EPA, as specified in July 1996, Title 40 CFR part 51, subpart S, Appendix D, paragraph (III).

(D) Steady-State Test Equipment. Steady-state test equipment requirements for model years 1971–1980 shall be as specified in July 1996, Title 40 CFR part 51, subpart S, Appendix D, which is adopted by reference.

(7) Documentation.

(A) The contractor shall provide the owners or drivers of vehicles that pass the emission inspection, or are issued a waiver, an emission inspection certificate of compliance and emission inspection sticker.

1. The certificate of compliance shall contain—

A. A vehicle description, including license plate number, vehicle title number, vehicle identification number, vehicle make, vehicle model, vehicle model year, and odometer reading;

B. The date and time of inspection;

C. The applicable test standards;

D. The applicable test results, including exhaust concentrations, a pass indicator for the evaporative system pressure test(s), a pass indicator for visual inspection of the evaporative system and a pass indicator for the visual emission control device inspection;

E. The results of the recall provisions check, if applicable, including the recall campaign number and the date the recall repairs were completed;

F. A certification that tests were performed in accordance with the regulations; and

G. A waiver indicator, if applicable.

2. The emission inspection sticker shall—

A. Be affixed by the emission inspector to each vehicle which is subject to and passes the emission inspection, or has been issued a waiver. An emission inspection sticker affixed to a vehicle that has been issued a waiver shall have a waiver indicator clearly visible on the sticker; and

B. Be affixed on the inside of the vehicle's front windshield in the lower left hand corner. Previous emission inspection stickers affixed to the windshield shall be removed. Destroyed, damaged, or lost stickers can only be replaced after a satisfactory explanation of the details of the incident has been furnished to the department. Stickers are valid for two (2) calendar years.

(B) The contractor shall provide the vehicle owner or driver who fails an inspection with a computer-generated emission inspection test report. Also provided will be a repair facility list, a repair data sheet, and a copy of the consumer complaint procedure. The contractor shall not refer vehicle owners to a particular repair station(s) that may or may not be included on the repair facility list.

1. The emission inspection test report shall include:

A. A vehicle description, including license plate number, vehicle title number, vehicle identification number, vehicle make,

vehicle model, vehicle model year, and odometer reading;

B. The date and time of test;

C. The name or identification number of the individual(s) performing the test and the location of the test station and lane number;

D. The type of tests performed, including emission tests, visual checks for the presence of emission control components, and functional evaporative system tests;

E. The applicable test standards;

F. The test results, including exhaust quantities, pass/fail results for the evaporative system pressure test(s), pass/fail results for the visual inspection of the evaporative system and which emission control devices inspected were passed, failed, or not applicable;

G. To the extent possible, a description of the nature of the failure and the components responsible, recommended repair and adjustment procedures, and an estimated cost for those repairs;

H. A statement indicating the availability of warranty coverage as required in section 207 of the Clean Air Act;

I. The results of the recall provisions check, if applicable, including the recall campaign number and date the recall repairs were completed; and

J. A statement that the emission inspection test report is not valid for vehicle registration purposes.

2. The repair facilities list will list facilities employing at least one (1) recognized repair technician in the area which perform repairs on vehicles submitted for reinspection and information on the results of emission repairs performed by these facilities. This information will include:

A. Statistics on the number of vehicles submitted for a reinspection after repairs by the repair facility;

B. The percentage of vehicles repaired by the repair facility that required more than one (1) reinspection before passing; and

C. The percentage of vehicles repaired by the repair facility that were granted waivers.

3. A repair data sheet must be completed prior to a reinspection. The repair data sheet shall include:

A. Repairs performed;

B. Cost of repairs;

C. Name of the repair technician; and

D. Name, address, and telephone number of the repair facility and the facility's state tax identification number.

4. The consumer complaint procedure will include the telephone number of the department's quality assurance officer. Any

challenge regarding the performance or results of the test must be made in writing within ten (10) business days of the failure of the emission inspection.

(8) Quality Control.

(A) Quality Control Requirements for the Contractor(s).

1. Contractor conduct. The department shall appoint only entities under contractual agreement with the department to operate official emission inspection stations, which includes conducting emission inspections and issuing certificates of compliance. Conducting the business of the official emission inspection station shall be performed in such a way that it satisfies the intent of the vehicle emission inspection program by effectively identifying vehicles that fail to meet acceptable emission standards. Failure to comply with the provisions of this subsection shall be considered sufficient cause for suspension of emission inspection privileges and authority to issue certificates of compliance. Misconduct of the contractor as established in this rule and in the contract shall be a violation of this rule and may result in dismissal as an emission inspection station operator. The contractor shall pay a monetary penalty to the department for a violation of this rule or of the contract by contractor personnel. Violations shall include, but are not limited to, actions which result in improper or fraudulent issuance of a certificate of compliance or a compliance waiver. The penalty shall be determined by a penalty schedule established in the contract.

2. Emission inspectors. All contractor personnel who perform emission inspections at each emission inspection station will be designated by the contractor as an emission inspector. The contractor shall be responsible for the conduct of emission inspectors. The contractor shall maintain for the department a registry of designated emission inspectors, that at a minimum includes the inspector's name, Social Security number, beginning date of inspection duties, ending date of inspection duties and description of inspection performance. Designation as an emission inspector may be suspended by a department quality assurance officer immediately at any time due to a violation of this rule or a provision of the contract. The contractor shall provide to the department an education and training plan, to be approved by the department, for designated emission inspectors.

3. Inspection records. All inspection records, calibration records, and control charts shall be accurately created, recorded, and maintained. The contractor, and all employees of the contractor, shall make

available all records and information requested by the department and shall fully cooperate with department personnel, and other authorized state representatives or agents, who conduct audits and other quality assurance procedures. All contractors subject to this rule shall maintain emissions test records, including repair information from any emissions test as well as all test results. These records shall be kept for at least three (3) years after date of an initial emissions inspection. These records shall be made available immediately upon request for review by department personnel. These records shall also be made available to the department on a continual basis through the use of an automated communication system approved by the department.

(B) General Requirements. General requirements for quality control practices for all test equipment shall be as follows:

1. At a minimum, the practices described in this section, in the contract, and in July 1996, Title 40 CFR part 51, subpart S, Appendix A, which is adopted by reference, shall be followed;

2. Preventive maintenance on all inspection equipment shall be performed on a periodic basis, as provided by the contract between the department and the contractor(s) and consistent with EPA and the equipment manufacturer's requirements;

3. To assure quality control, computerized analyzers shall automatically record quality control check information, lockouts, attempted tampering and any circumstances which require a service representative to work on the equipment;

4. To assure test accuracy, equipment shall be maintained according to demonstrated good engineering procedures;

5. Computer control of quality assurance checks and quality control charts shall be used whenever possible; and

6. The emission inspection station shall transmit the emission inspection results to the department as prescribed in the contract between the department and the contractor(s).

(C) Requirements for Steady-State Emissions Testing Equipment. Calibration and maintenance procedures for steady-state emissions testing equipment shall be described in July 1996, Title 40 CFR part 51, subpart S, Appendix A, paragraph (I), which is adopted by reference.

(D) Requirements for Transient Emissions Testing Equipment. Calibration and maintenance procedures for transient emissions testing equipment shall be as described in July 1996, Title 40 CFR part 51, subpart S, Appendix A, paragraph (II), which is adopt-

ed by reference, or as described in any other procedure approved by EPA and the department.

(9) Appendices.

(A) Appendix A. Official Forms.

1. Certificate of Compliance.
2. Waiver Affidavit.
3. Repair Data Sheet.
4. Emission Inspection Sticker.

*AUTHORITY: section 643.310.1, RSMo 1994.\* Original rule filed June 14, 1982, effective Jan. 13, 1983. Amended: Filed Aug. 15, 1983, effective Jan. 13, 1984. Emergency rescission and rule filed Aug. 15, 1994, effective Aug. 28, 1994, expired Dec. 25, 1994. Emergency amendment filed Dec. 12, 1994, effective Dec. 25, 1994, expired April 23, 1995. Rescinded and readopted: Filed July 20, 1994, effective March 30, 1995. Amended: Filed April 17, 1995, effective Nov. 30, 1995. Amended: Filed Dec. 13, 1996, effective July 30, 1997.*

*\*Original authority 1994.*



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 AIR POLLUTION CONTROL PROGRAM  
 MOTOR VEHICLE EMISSION INSPECTION  
**CERTIFICATE OF COMPLIANCE**

# PRINTED HERE

( PLEASE CHECK ONE )

|   |
|---|
| <input type="checkbox"/> COMPLY WITH TEST STANDARDS |
| <input type="checkbox"/> WAIVER FROM COMPLIANCE     |

|                  |                               |                  |
|------------------|-------------------------------|------------------|
| DATE             | VEHICLE MAKE                  | MODEL            |
| TIME             | MODEL YEAR                    |                  |
| OWNER NAME       | VEHICLE IDENTIFICATION NUMBER |                  |
| ADDRESS          | TITLE NUMBER                  |                  |
|                  | PLATE NUMBER                  | ODOMETER READING |
| TELEPHONE NUMBER | INSPECTION CYCLE NUMBER       |                  |

**RECALL NOTICE**

N/A \_\_\_\_\_ CAMPAIGN NUMBER \_\_\_\_\_  
 DATE REPAIRS WERE COMPLETED \_\_\_\_\_

**EXHAUST CONCENTRATIONS**

|                     | HYDRO CARBON | CARBON MONOXIDE | NITROUS OXIDES |
|---------------------|--------------|-----------------|----------------|
| STANDARD            | _____        | _____           | _____          |
| MEASURED            | _____        | _____           | _____          |
| PURGE TEST          | N/A _____    | CAPACITY _____  |                |
| PRESSURE TEST, PASS | N/A _____    | PASS _____      |                |
| VISUAL CHECK, PASS  | N/A _____    | PASS _____      |                |

ALL EMISSION INSPECTION TESTS HAVE BEEN PERFORMED IN ACCORDANCE  
 WITH FEDERAL AND STATE REGULATIONS.

THIS INSPECTION IS MANDATED BY YOUR UNITED STATES CONGRESS.

MO 780-1485 (6-94)



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
AIR POLLUTION CONTROL PROGRAM  
MOTOR VEHICLE EMISSION INSPECTION  
WAIVER AFFIDAVIT

# PRINTED HERE

|   |                               |                  |
|---|-------------------------------|------------------|
| DATE  | VEHICLE MAKE                  | MODEL            |
| TIME  | MODEL YEAR                    |                  |
| OWNERS NAME   | VEHICLE IDENTIFICATION NUMBER |                  |
| ADDRESS   | TITLE NUMBER                  |                  |
|   | PLATE NUMBER                  | ODOMETER READING |
| TELEPHONE NUMBER  | INSPECTION CYCLE NUMBER       |                  |
| <p>AFTER CAREFUL EXAMINATION OF THIS VEHICLE AND REPAIR RECEIPTS, I HAVE DETERMINED TO THE BEST OF MY ABILITY THAT THE REPAIRS LISTED ON THE ATTACHED REPAIR DATA SHEET (S) HAVE BEEN COMPLETED.</p>  |                               |                  |
| INSPECTOR'S SIGNATURE   | DATE                          |                  |
| <p>TOTAL QUALIFYING AMOUNT SPENT ON EMISSION RELATED REPAIRS: _____</p>   |                               |                  |
| <p>THE REPAIRS LISTED ON THE ATTACHED REPAIR DATA SHEET (S) HAVE ACTUALLY BEEN PERFORMED IN AN ATTEMPT TO MEET THE APPROPRIATE EMISSION STANDARDS FOR MY VEHICLE. I HAVE SPENT THE AMOUNT INDICATED ABOVE FOR APPROPRIATE EMISSION RELATED REPAIRS ON MY VEHICLE.</p> |                               |                  |
| OWNER'S SIGNATURE   | DATE                          |                  |

MO 780-1486 (6-94)



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 AIR POLLUTION CONTROL PROGRAM  
**REPAIR DATA SHEET**

INSPECTION CYCLE NUMBER \_\_\_\_\_

FIRST REINSPECTION       SECOND REINSPECTION       SUBSEQUENT REINSPECTION

PLEASE FILL OUT THE FOLLOWING BEFORE BRINGING YOUR VEHICLE BACK FOR REINSPECTION.

**REPAIRED BY**

SHOP REPAIRED, FACILITY NAME \_\_\_\_\_

TAX IDENTIFICATION NUMBER \_\_\_\_\_

REPAIR TECHNICIAN (S) \_\_\_\_\_

OWNER REPAIRED  
 TECHNICIAN (S) SIGNATURE \_\_\_\_\_

**REPAIRS PERFORMED**

| DESCRIPTION OF SERVICE | COST COVERED BY WARRANTY |       | COST NOT COVERED BY WARRANTY |       |
|------------------------|--------------------------|-------|------------------------------|-------|
|                        | PARTS                    | LABOR | PARTS                        | LABOR |
|                        |                          |       |                              |       |

MO 780-1484 (6-94)





**STATE OF MISSOURI**

**MOTOR VEHICLE EMISSION INSPECTION COMPLIANCE**

( BAR CODE )

**# 0 1 2 5 9 3 4 7 2**

THIS INSPECTION IS MANDATED BY YOUR UNITED STATES CONGRESS.

**1996**

|     |     |     |     |     |      |      |     |      |     |     |     |
|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|
| JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|

MO 780-1483 (6-94)



**10 CSR 10-5.390 Control of Emissions From Manufacture 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 the St. Louis metropolitan area.*

(1) Application.

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

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

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

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

(4) Operating Equipment and Operating Procedure Requirements.

(A) Tanks storing VOC with a vapor pressure greater than or equal to 10 kilopascals (kPa) (1.5 psi) at twenty degrees Celsius (20° C), shall be equipped with pressure/vacuum conservation vents set at  $\pm 0.2$  kPa (.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.

(B) Covers shall be installed on all open-top tanks used for the production of nonwaterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

(C) Covers shall be installed on all tanks containing VOC used for cleaning equipment.

These covers shall remain closed except when operator access is required.

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

(E) All grinding mills shall be operated and maintained in accordance with manufacturers' specifications. The manufacturers' specifications shall be kept on file and made available to the director upon his/her request.

(F) 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.

1. 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.

2. If equivalent controls are used, the VOC emissions must be reduced by an amount equivalent to the reduction which would be achieved under paragraph (4)(F)1. Any owner or operator desiring to use equivalent controls to comply with this subsection shall submit proof of equivalency as part of the control plan required under subsection (5)(A) of this rule. Equivalent controls may not be used unless approved by the director.

(5) Compliance Dates.

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

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

(6) Compliance Methods and Recordkeeping.

(A) The control efficiency specified in subsections (4)(D) and (F) shall be determined by the testing methods referenced at 10 CSR 10-6.030(14)(A).

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

1. Exit stream temperature on all condensers; and

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

(C) Records shall be kept on production rates sufficient to determine daily VOC emissions.

(D) The owner or operator shall record all information derived from monitoring required under subsections (6)(B) and (C) and shall keep records for a period of not less than two (2) years. All these records shall be made available to the director upon request.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed Oct. 13, 1983, effective March 11, 1984. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

**10 CSR 10-5.400 Control of Emissions From Production of Maleic Anhydride (Rescinded March 11, 1989)**

*AUTHORITY: section 203.059, RSMo 1986. Original rule filed June 4, 1985, effective Oct. 26, 1985. Rescinded: Filed Oct. 4, 1988, effective March 11, 1989.*

**10 CSR 10-5.410 Control of Emissions From Manufacture of Polystyrene Resin**

*PURPOSE: This rule restricts emissions of volatile organic compounds from the manufacture of polystyrene resin.*

(1) Applicability.

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

(B) This rule shall apply to all installations engaged in the manufacture of polystyrene resin.

(2) Emissions Limitation.

(A) Volatile organic compound (VOC) emissions shall be limited to a daily average of 0.24 pounds of VOC per two thousand pounds (2000 lbs.) of resin produced by the installation.

(B) The emissions limitation set forth in this section shall be achieved through the use of a condensation device which recycles styrene monomer through the resin manufacturing process or by the use of a capital device approved by the director that will provide an equivalent emissions reduction.

(3) Compliance Method. Compliance with section (2) of this rule shall be determined by

the test method referenced in 10 CSR 10-6.030(14)(A).

(4) Compliance Date. Compliance with this rule by any affected installation shall occur no later than June 1, 1985.

(5) Recordkeeping. The owners or operators of polystyrene manufacturing plants subject to this rule shall keep records of all emission testing and maintenance of all emission control devices. Records shall be kept for two (2) years and shall be made available to the director upon request.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed Dec. 11, 1984, effective May 11, 1985. Amended: Filed June 5, 1986, effective Sept. 26, 1986. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*

#### 10 CSR 10-5.420 Control of Equipment Leaks From Synthetic Organic Chemical and Polymer Manufacturing Plants

*PURPOSE: This rule is designed to control leaks of volatile organic compounds from synthetic organic chemical and polymer manufacturing equipment.*

*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) Definitions.

(A) A component shall be considered in gas volatile organic compounds (VOC) service if it contacts a process fluid containing ten percent (10%) or greater VOC by weight that is in a gaseous state at operating conditions.

(B) A component shall be considered in light liquid VOC service if it contacts a process fluid containing ten percent (10%) or greater light liquid VOC by weight.

(C) A light liquid VOC is defined as a fluid VOC with a vapor pressure greater than 0.3 kilopascals (kPa) at twenty degrees Celsius (20°C).

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

(2) Applicability.

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

(B) This rule applies to all source operations with the potential of processing at least nine hundred eighty (980) tons per year of light liquid and gaseous VOC and producing as intermediate or final products any of those chemicals listed in 10 CSR 10-6.070 (40 CFR part 60, subpart VV).

(3) General Provisions.

(A) Leaking components shall be repaired within fifteen (15) days of the date the leak was detected. A source shall be considered leaking if monitoring results in an instrument reading of ten thousand parts per million (10,000 ppm) by volume or greater at a distance no more than five centimeters (5 cm) from the source or if visual inspection indicates leaks. Repair shall be considered as reduction of the measured VOC concentration below ten thousand (10,000) ppm by volume at a distance of no more than five centimeters (5 cm) from the source. Leaking components which cannot be repaired without a unit shutdown shall be repaired at the next scheduled unit shutdown or within ninety (90) days of the date the leak was detected, whichever comes first.

(B) The detection instrument and the monitoring method employed shall be in accordance with 10 CSR 10-6.070 (40 CFR part 60, Appendix A, method 21).

(C) Pumps with double mechanical seals including a barrier fluid system shall be exempt from the requirements of subsection (3)(F) if—

1. Operated with the barrier fluid at a pressure greater than the pump stuffing box pressure;

2. Equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device; or

3. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(D) Safety/relief valves equipped in series with a rupture disk and a spring return valve or any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage to a control device shall be exempt from the requirements of subsections (3)(E)–(J).

(E) Open-ended valves or lines shall be equipped with a cap, plug or second valve to seal the open end except during operations requiring process fluid flow through the open-ended valve or line, during maintenance procedures or to ensure safe operations.

(F) Quarterly monitoring shall be required for the following components in VOC service:

1. Pumps in light liquid VOC service; and

2. Compressors in gas VOC service.

(G) Valves in VOC service not regulated externally or that are difficult or unsafe to monitor shall be monitored annually during April and repaired if leaking.

(H) All valves in VOC service shall be performance tested annually during April. Performance testing shall consist of monitoring all valves in VOC service and repairing any that are leaking. If more than two percent (2%) of the valves monitored in any process unit are leaking, all valves in VOC service in that process unit except those covered by subsection (3)(E) shall be monitored quarterly until less than two percent (2%) are leaking.

(I) Pumps in light liquid VOC service weekly shall be inspected visually for indications of leaks.

(J) Safety/relief valves and any other pressure relief devices in VOC services shall be additionally monitored after each pressure relief.

(4) Reporting and Recordkeeping. The owner or operator of a synthetic organic chemical or polymer manufacturing plant covered by this rule shall maintain a listing of the pumps, compressors and valves in VOC service and identify the VOC contained in each component. The owner or operator also shall maintain records of the results of the monitoring required in section (3) including tagging any leaking components and actions taken to repair any leaks that are discovered. These records shall be kept by the owner or operator for at least two (2) years and submitted to the director upon request.

(5) Compliance Date. Owners or operators subject to this rule shall be in compliance with the monitoring, leak repair and recordkeeping procedures described in sections (3) and (4) of this rule no later than October 11, 1986.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed April 2, 1986, effective Sept. 26, 1986. Amended: Filed Oct. 4, 1988, effective March 11, 1989.*

*\*Original authority 1965, amended 1972, 1992, 1993.*



**10 CSR 10-5.430 Control of Emissions From the Surface Coating of Chrome-Plated and Resist Plastic Parts**

*PURPOSE: This rule limits emissions of volatile organic compounds from the surface coating of chrome-plated plastic parts.*

(1) Applicability. This rule applies only to the Seigel-Robert Plating Company, Incorporated located at 8645 South Broadway, St. Louis, Missouri.

(2) General Provisions. The Seigel-Robert Plating Company, Incorporated shall not emit to the atmosphere any volatile organic compounds (VOCs) from any surface coating operation in excess of the amounts allowed in section (3) of this rule.

(3) Emission Limits and Dates of Compliance.

| Surface Coating Process               | Emission Limit lb./gal. coating | Dates of Compliance |
|---------------------------------------|---------------------------------|---------------------|
| Chrome-Plated and Extreme Performance | 6.2                             | 12/25/87            |
| Chrome Resist                         | 6.4                             | 12/25/87            |

(4) Determination of Compliance. Compliance with section (2) of this rule shall be determined by the test method referenced in 10 CSR 10-6.030(14)(C) using the one (1)-hour bake. The coating manufacturers' formulation data and specifications may be used to demonstrate compliance, but only after confirmation by the test method referenced previously.

(5) Recordkeeping.

(A) The owner or operator of a coating line shall keep daily records detailing specific VOC sources to include:

1. The type and quantity of coating used for specific time period;
2. The coating manufacturer's formulation data for each coating;
3. The type and quantity of solvents used for coating thinning, purging and equipment cleaning;
4. All test results to determine coating makeup;
5. The type and quantity of waste solvents reclaimed or discarded; and
6. Any additional information pertinent to the calculation of VOC emissions.

(B) Records as required under subsection (5)(A) shall be retained by the owner or operator for a minimum of two (2) years. These records shall be made available to the director upon request.

*AUTHORITY: section 643.050, RSMo 1994. Original rule filed Aug. 4, 1987, effective Dec. 24, 1987.*

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

**10 CSR 10-5.440 Control of Emissions from Bakery Ovens**

*PURPOSE: This rule restricts the emission of volatile organic compounds from bakery ovens at large commercial bakeries.*

*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) Definitions. Definitions of some of the terms used in this rule may be found in 10 CSR 10-6.020 Definition and Common Reference Tables.

(2) Applicability.

(A) This rule shall apply throughout the City of St. Louis, and Jefferson, St. Charles, Franklin, and St. Louis Counties.

(B) This rule shall apply to new or existing commercial bakeries whose potential emissions are greater than one hundred tons per year (100 tpy).

(3) Requirement. The applicability level in subsection (2)(B) of this rule shall change to the level of major source as defined for any ozone nonattainment classification. Existing or new commercial bakeries that emit or have the potential to emit, in ozone nonattainment areas, one hundred (100) tpy or more of volatile organic compounds in areas classified as marginal or moderate, fifty (50) tpy or more in areas classified as serious, twenty-five (25) tpy or more in areas classified as severe, and ten (10) tpy or more in areas classified as extreme shall install volatile organic compound (VOC) emissions control device(s) in order to achieve at least eighty percent (80%) total removal efficiency on the combined emissions of all baking ovens.

(4) Determination of Compliance. Compliance with this rule shall be determined by the following methods:

(A) The destruction efficiency shall be determined by using (EPA) Test Method 25A

or another equivalent method approved by the director;

(B) The amount of VOC per ton of baked bread shall be based on the EPA emission factors published in the Environmental Protection Agency document entitled "Alternative Control Technology Document for Bakery Oven Emissions," EPA 453/R-92-017, December 1992, or administrator approved alternative methods determined through stack testing or industry literature acceptable to the administrator and to the director. Alternative methods must be approved by the director; and

(C) The capture efficiency of the air pollution control device shall be determined by an administrator approved method. Administrator approved alternative plans that demonstrate a bakery's oven(s) operate under negative pressure may preclude the need for capture efficiency determination. Alternative methods and plans must be approved by the director.

(5) Recordkeeping.

(A) The owner or operator of a bakery oven shall maintain a daily record of operations. The daily records shall include at least:

1. The amount of raw material processed;
2. The percentage of yeast used;
3. The fermentation time;
4. The type of product baked;
5. The amount of product baked;
6. The emission factor used for each product; and
7. The quarterly emissions.

(B) Bakery owners or operators employing VOC emission control device(s) shall, as applicable, continuously monitor and record the following parameters of such device(s) while the bakery oven is in operation:

1. Exhaust temperature of all combustion devices, if used. Combustion devices must be operated at temperatures high enough to achieve optimum destruction efficiency. The optimum operating temperatures will be established at the time of compliance determination;
2. Temperature rise across a catalytic oxidation bed, if used;
3. Exit stream temperature on all condensers, if used; and
4. Any other monitoring parameters as found necessary by the director.

(C) Records under subsections (5)(A) and (B) shall be retained by the owner or operator for a minimum of five (5) years. These records shall be made available immediately upon request for review by the Missouri Department of Natural Resources personnel

and other air pollution control agencies upon presentation of proper credentials.

(6) Compliance Schedules. Any bakery owner or operator of an existing source subject to this rule shall submit a compliance plan to the director within three (3) months of the rule effective date or on the date that the commercial bakery becomes subject to this rule whichever is more recent. The compliance plan shall include, but shall not be limited to, control device description, testing protocol, date of compliance, and an operating and maintenance plan for the control device(s). The owner or operator shall demonstrate compliance with this rule within twelve (12) months of the date that the source becomes subject to the rule.

*AUTHORITY: section 643.050, RSMo Supp. 1995.\* Original rule filed Oct. 7, 1994, effective May 28, 1995. Amended: Filed May 15, 1996, effective Dec. 30, 1996.*

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

**10 CSR 10-5.442 Control of Emissions from Lithographic Printing Operations**

*PURPOSE: This rule restricts volatile organic compound emissions from lithographic printing 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) Definitions. Definitions of some terms specified in this rule may be found in 10 CSR 10-6.020. Other definitions specific to this rule are as follows:

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

(B) Alcohol Substitutes—Nonalcohol additives that contain volatile organic compounds (VOCs) and are used in the fountain solution;

(C) Cleanup solution—A liquid used to remove printing ink and debris from the surfaces of the printing press and its parts;

(D) 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;

(E) Heatset—A class of web-offset lithography which requires a heated dryer to evaporate the ink oils and solvents from the printing inks;

(F) Lithographic printing—A printing process where a planographic plate is used with the image area oleophilic and the nonimage area hydrophilic;

(G) Press—A printing production assembly that can be made up of one (1) or many units to produce a finished product;

(H) Printing—Any operation that imparts color, design, alphabet, or numerals on a substrate;

(I) Printing ink—Any fluid or viscous composition used in printing, impressing, or transferring an image onto a substrate;

(J) Offset—The process that transfers an image from a plate to a rubber blanket cylinder before transfer to the substrate surface to be printed;

(K) Sheet-fed—Printing presses that are fed from a stack of individual paper sheets instead of a web. Sheet-fed presses generally use coldset inks; and

(L) Web—The substrate printed in a continuous roll-fed printing process.

(2) Applicability.

(A) This rule shall apply to installations that operate offset lithographic printing presses including heatset web offset presses, non-heatset web offset presses (newspaper and non-newspaper), and non-heatset sheet-fed offset presses in the City of St. Louis and Jefferson, St. Charles, Franklin and St. Louis Counties.

(B) This rule shall apply only to installations described in subsection (2)(A) which have ever had the potential to emit VOCs equal to or greater than one hundred (100) tons per year. Once the installation exceeds the applicability level of this rule, it shall remain subject to this rule even if its potential emissions drop below the applicability level.

(C) This rule shall not apply to printing on fabric, metal or plastic.

(3) Emission Limits.

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

1. For heatset web presses—

A. The fountain solution contains one and six-tenths percent (1.6%) or less by volume of alcohol; or

B. The fountain solution contains three percent (3.0%) or less by volume of

alcohol and is refrigerated to a temperature of sixty degrees Fahrenheit (60°F), or less; or

C. The fountain solution contains five percent (5.0%) or less by volume alcohol substitutes; and

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

2. For sheet-fed presses—

A. The fountain solution contains five percent (5.0%) or less by volume of alcohol; or

B. The fountain solution contains eight and five-tenths percent (8.5%) or less by volume of alcohol and is refrigerated to a temperature of sixty degrees Fahrenheit (60°F), or less; or

C. The fountain solution contains five percent (5.0%) or less by volume of alcohol substitutes or a combination of alcohol and alcohol substitutes; and

D. The fountain solution mixing tanks containing alcohol-based solutions are covered;

3. For non-heatset web presses—

A. The fountain solution contains five percent (5.0%) or less by volume alcohol substitutes; or

B. The fountain solution contains five percent (5%) or less by volume of a combination of alcohol and alcohol substitutes; and

C. The fountain solution mixing tanks containing alcohol-based solutions are covered;

4. Direct measurement of the alcohol content of the fountain solution sample(s) should be performed with a modification of the EPA Method 415.1. Alternately, a sample of the fountain solution may be taken from the fountain tray or reservoir of fountain solution during use and measured with a hydrometer or refractometer. The unit shall be considered in compliance with paragraphs (3)(A)1., 2., or 3. if the refractometer or hydrometer measurement is less than or equal to the measurement obtained with a modification of EPA Method 415.1, plus ten percent (10%);

5. The VOC content of a fountain solution containing alcohol substitutes or nonalcohol additives shall be established with proper recordkeeping including the amount of concentrated substitute added per quantity of fountain water, date of preparation and calculated VOC content of the final solution; and

6. Determination of fountain solution temperature for refrigerated fountain solutions shall be determined by a thermometer or other temperature detection device capable of reading to one-half degree Fahrenheit (0.5°F).

(B) No owner or operator shall use or permit the use of any offset lithographic printing

press that uses cleanup solutions containing VOCs unless—

1. The cleanup solution has a VOC content of thirty percent (30%) or less, by weight, or a composite vapor pressure less than or equal to ten (10) millimeters of Mercury (Hg) at twenty degrees Celsius (20°C);

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

3. The cleaning cloths used with the cleanup solutions 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. The cloths, when properly cleaned or disposed, shall be processed in such a way that as much of the solvent, as practicable, is recovered for further use or is destroyed. A cleaning and disposal plan shall be submitted to the director by the compliance deadline specified in section (5) of this rule. A copy of the plan must be kept on-site for inspection purposes.

(C) No owner or operator shall use or permit the use of any heatset web-offset lithographic printing press with a dryer that has ever had an actual emission rate of ten (10) tons per year or more of VOCs unless one hundred percent (100%) of the dryer exhaust is ducted to a control device that achieves ninety percent (90%) or greater, by weight control efficiency and the highest achievable capture efficiency reasonable. The dryer pressure shall be maintained below the pressure of the press room to reduce the potential for fugitive VOC emissions from the dryer. Testing procedures for capture efficiencies shall be done as stated in 10 CSR 10-6.030(20), or by another method approved by the director.

(D) Use of emission control equipment under subsection (3)(C) shall require 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 seventy-five hundredths of one percent ( $\pm 0.75\%$ ) measured in degrees Celsius, or two and one-half degrees Celsius (2.5°C);

2. The cumulative amount of VOC recovered during a calendar month for all VOC recovery equipment attached to a dryer; and

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

(4) Recordkeeping.

(A) All persons subject to this rule shall maintain records as required by this section sufficient to determine continuous compliance with this rule. These records shall be kept for at least two (2) years to be automatically extended if enforcement action is pending. These records shall be available immediately upon request for review by the Department of Natural Resources personnel and other air pollution control agencies upon presentation of proper credentials.

(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. Percent by volume of alcohol or alcohol substitute(s), if either is used, in fountain solution as monitored on a once-per-day basis;

2. Daily and monthly quantity of alcohol or alcohol substitute(s), if either is used, by volume added to the fountain solution;

3. A Material Safety Data Sheet (MSDS) listing the physical properties of alcohol or alcohol substitute(s) such as density and percent VOC as purchased from the supplier;

4. Results of any testing conducted on an emission unit at a regulated facility;

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

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

(D) For each lithographic printing installation subject to this rule, 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 in pounds of heatset inks as applied to substrate on a monthly basis;

3. Quantity in gallons of cleanup solution used on a monthly basis; and

4. A Material Safety Data Sheet listing the percentage by weight of VOC in the cleanup solution.

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

(5) Compliance.

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

1. Upon startup of presses which are not in existence and operating on the effective date of this rule; and

2. Within eighteen (18) months after the effective date of this rule for any presses in existence and operating on the effective date of this rule.

(B) All persons subject to the provisions of this rule and not in compliance with all provisions of this rule within twelve (12) months from the effective date of this rule must submit a compliance plan to the director for approval. This plan shall be received within six (6) months after the effective date of this rule. This plan shall 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.

(6) Testing Procedures. Testing and compliance demonstrations for subsection (3)(C) of this rule shall follow the procedures contained in Environmental Protection Agency Reference Methods 25 or 25A found in 40 CFR part 60 Appendix A. Further clarification shall be provided by Environmental Protection Agency memo dated October 25, 1993, from John B. Rasnic to all Environmental Protection Agency regional offices.

*AUTHORITY:* section 643.050, RSMo 1994.\* Original rule filed Oct. 7, 1994, effective May 28, 1995.

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

#### 10 CSR 10-5.443 Control of Gasoline Reid Vapor Pressure

*PURPOSE:* This rule limits the volatility of motor vehicle gasoline in the St. Louis ozone nonattainment area. By reducing the amount

of gasoline that evaporates into the atmosphere, emissions of volatile organic compounds will be reduced. Since volatile organic compounds are precursors to ozone formation, ambient ozone levels will be reduced. This rule is intended to reduce emissions as quickly as possible to minimize the risk of 1996 bump-up under the 1990 Clean Air Act Amendments from moderate to serious ozone nonattainment.

*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) Application. This rule shall apply throughout Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis.

(2) Definitions. Definitions of certain terms used in this rule can be found in 10 CSR 10-6.020.

(3) General Provisions and Effective Dates of Compliance.

(A) No person shall sell, dispense, supply, offer for sale, offer for supply, transport or exchange in trade for use gasoline intended for final use in the applicable areas that exceeds the Reid Vapor Pressure (RVP) limit in subsection (3)(B).

(B) The RVP of gasoline subject to this rule shall be restricted starting in 1995 as follows:

| RVP (psi)       | Facility       | Time Period |
|-----------------|----------------|-------------|
| 7.0 psi or less | All Facilities | 6/1-9/15    |

(C) Gasoline blends having at least nine percent (9%) but not more than ten percent (10%) ethyl alcohol by volume of the blended mixture shall have an RVP limit of one pound per square inch (1.0 psi) higher than the limit contained in subsection (3)(B).

(4) Gasoline Sampling Procedures. Gasoline sampling shall follow the procedures contained in "Sampling Procedures for Fuel Volatility," 40 CFR part 80, Appendix D, in effect July 1, 1993.

(5) Gasoline Testing Procedures for RVP and Determination of Compliance.

(A) Gasoline testing shall follow the procedures contained in "Tests for Determining Reid Vapor Pressure (RVP) of Gasoline and Gasoline-Oxygenate Blends," 40 CFR, part 80, Appendix E in effect July 1, 1993.

(B) To determine compliance when field analysis indicates the RVP is between 7.0 psi and 7.3 psi for conventional gasoline or between 8.0 psi and 8.3 psi for nine to ten percent (9%-10%) ethyl alcohol blends, the department shall conduct additional testing. Additional testing shall include independent analysis by three (3) separate laboratories of three (3) independent samples taken sequentially, in accordance with sections (4) and (5) of this rule. If all of the measured RVP of the samples are above 7.0 psi for conventional gasoline or above 8.0 psi for nine to ten percent (9%-10%) ethyl alcohol blends, the department may take enforcement action.

(6) Recordkeeping.

(A) All persons subject to this rule shall maintain records of any RVP testing and test results during the compliance period specified in section (3). These records shall be kept for at least two (2) years after the date of a completed RVP test. These records shall be made available immediately upon request for review by Department of Natural Resources personnel and city and county personnel certified under section 643.140, RSMo.

(B) Each bill of lading, invoice, loading ticket, delivery ticket, and other document which accompanies a shipment of gasoline (which includes gasoline blended with ethyl alcohol) shall contain a legible and conspicuous statement that the RVP of the gasoline does not exceed seven (7.0) psi, in accordance with this rule for conventional gasoline, or that the RVP does not exceed eight (8.0) psi for nine to ten percent (9%-10%) ethyl alcohol blends.

(C) Each bill of lading, invoice, loading ticket, delivery ticket, and other document which accompanies a shipment of gasoline containing ethyl alcohol shall contain a legible and conspicuous statement that the gasoline being shipped contains ethyl alcohol and the percentage concentration of ethyl alcohol is between nine percent to ten percent (9%-10%), per the RVP exception under subsection (3)(C) of this rule.

(D) All persons subject to this rule shall keep records of the bill of lading, invoice, loading ticket, delivery ticket, and other documents accompanying a shipment of gasoline during the compliance period specified in section (3). These records shall be kept for at least two (2) years after the date of delivery. These records shall be made available immediately upon request for review by Department of Natural Resources personnel and city and county personnel certified under section 643.140, RSMo.

ment of Natural Resources personnel and city and county personnel certified under section 643.140, RSMo.

(E) The director may require additional recordkeeping on a case-by-case basis.

(7) Violations and Penalties. Persons violating this rule shall be subject to penalties contained in sections 643.085 and 643.151, RSMo.

(8) Exceptions.

(A) Gasoline that exceeds the RVP limits will not violate this rule if the gasoline is separately stored, sealed, clearly labeled and not used until it is in compliance with this rule. The label shall state that the gasoline is prohibited by Missouri law from being sold, dispensed, supplied, offered for sale, offered for supply, transported or exchanged in trade until the specific date that the gasoline shall be in compliance with this rule.

(B) An individual consumer of gasoline who dispenses gasoline into his/her personal motor vehicle is exempt from this rule.

(C) Gasoline used only to fuel agricultural vehicles on property zoned for agricultural use is exempt from this rule.

(D) Owners and operators of facilities that only dispense gasoline into individual motor vehicles are not required to conduct RVP testing of section (5).

(E) Federal specification reformulated gasoline (RFG) fully satisfies the requirements of section (3) of this rule.

*AUTHORITY: section 643.050, RSMo 1994.\* Original rule filed Dec. 13, 1993, effective July 30, 1994. Amended: Filed Oct. 7, 1994, effective May 28, 1995.*

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

**10 CSR 10-5.450 Control of VOC Emissions from Traffic Coatings**

*PURPOSE: This rule limits volatile organic compound content of traffic coatings. Volatile organic compounds are precursors to ozone, which poses health and environmental concerns. This rule is part of the fifteen percent state implementation plan for the ozone nonattainment area.*

*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) Definitions.

(A) Grams of volatile organic compounds (VOC) per liter of coating, less water and less exempt compounds is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

(B) Traffic coatings are coatings formulated for and applied to public streets, highways, and other surfaces including, but not limited to, curbs, berms, driveways, and parking lots.

$$\frac{\text{Grams of VOC per liter of coating, less water and less exempt compounds}}{= \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}}$$

Where:  $W_s$  = weight of volatile compounds in grams

$W_w$  = weight of water in grams

$W_{es}$  = weight of exempt compounds in grams

$V_m$  = volume of material in liters

$V_w$  = volume of water in liters

$V_{es}$  = volume of exempt compounds in liters

(C) Other definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.

(2) Applicability.

(A) This rule shall apply throughout the St. Louis metropolitan area which includes the City of St. Louis and Jefferson, Franklin, St. Louis, and St. Charles Counties.

(B) This rule shall apply to any person who supplies, sells, offers for sale, applies, solicits the application of, or manufactures for use any coating intended for use in traffic marking.

(C) This rule shall not apply to traffic coatings sold for shipment outside of the area defined in subsection (2)(A) or for shipment to other manufacturers for repackaging.

(3) Provisions.

(A) Except as provided in subsections (3)(B) and (C), no person shall supply, sell, offer for sale, apply, or solicit the application of, any traffic coating which, at the time of sale or manufacture, contains more than one hundred fifty (150) grams of VOCs per liter of coating one point twenty-six (1.26) pounds per gallon, excluding water, exempt compounds, and any colorant added to tint bases, or manufacture, blend, or repackage such a coating for use within the St. Louis

metropolitan area without the approval of the staff director.

(B) If anywhere on the container of any coating, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the coating may be used as, or is suitable for use as, a coating for which a lower VOC is specified, then the lowest VOC standard shall apply.

(C) Sale or application of a coating manufactured prior to the effective date of the rule, and not complying with the standard in subsection (3)(A), shall not constitute a violation until April 15, 1996.

(D) The manufacture of a coating not complying with subsection (3)(A) shall not constitute a violation until thirty (30) days after the effective date of the rule.

(E) All VOC-containing materials shall be stored in closed containers when not in use. In use includes, but is not limited to, being accessed, filled, emptied, or repaired.

(4) Labeling.

(A) Containers for all traffic coatings shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings shall file with the staff director an explanation of each code.

(B) Containers for all coatings subject to the requirements of this rule shall carry a statement of the manufacturer's recommendation regarding thinning of the coating. The recommendation shall either specify that the coating is to be applied under normal environmental and application conditions without thinning, or limit thinning required for normal environmental and application conditions such that after thinning the coating will not exceed one hundred fifty (150) grams of VOCs per liter.

(C) Containers of any coating subject to this rule shall display the maximum grams of VOC in a liter of traffic coating as produced by the manufacturer, excluding water and any colorant added to tint bases and after any recommended thinning. The VOC content displayed may be calculated using product formulation data, or may be determined using the test method in section (5).

(5) Test Method.

(A) The VOC content of traffic coatings shall be determined by the Environmental Protection Agency (EPA) Reference Test Method 24 (Determination on Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, *Code of Federal Regulations* Title 40, part 60, Appendix A).

(B) Other test methods for determining VOC content may be used if found to be equivalent after review by the director.

*AUTHORITY: 643.050, RSMo 1994.\* Original rule filed Oct. 7, 1994, effective May 28, 1995.*

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

**10 CSR 10-5.451 Control of Emissions from Aluminum Foil Rolling**

*PURPOSE: This rule specifies operating procedures, materials requirements, and control equipment specifications for the reduction of volatile organic compounds from aluminum foil rolling mills in the St. Louis ozone nonattainment area. Since volatile organic compounds are precursors to ozone formation, ambient ozone levels will be reduced.*

*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. This rule shall apply to all aluminum foil rolling facilities with potential volatile organic compound (VOC) emissions greater than or equal to one hundred (100) tons per year throughout St. Louis City and Jefferson, St. Charles, Franklin and St. Louis Counties.

(2) Definitions.

(A) Cold rolling mill—Batch process aluminum sheet rolling mill with a preset gap between the work rolls used to reduce the sheet thickness. The process generally occurs at temperatures below two hundred sixty-five degrees Fahrenheit (265°F.). A cold rolling mill is used mainly for the production of aluminum sheet at gauges between 0.3 inches to 0.002 inches. Reductions to finish gauge may occur in one (1) pass or several passes.

(B) Intermediate foil mill—Batch process aluminum foil rolling mill with the work rolls in contact to reduce foil gauge. This process reduces finished sheet to intermediate foil gauges. An intermediate foil mill is used mainly in the production of aluminum foil at gauges between 0.010 inches to 0.0004 inches. Reductions to finish gauge may occur in several passes through the mill.



(C) Finish foil mill—Batch process aluminum foil rolling mill with work rolls in contact to reduce foil gauge. This process reduces intermediate foil and in some cases finished sheet to final gauges. A finish foil mill is used mainly in the production of aluminum foil at gauges between 0.005 inches to 0.00018 inches. Reductions to finish gauge may occur in several passes through the mill.

(D) Rolling lubricant—Petroleum based oil usually mixed with additives. The lubricant is used to cool the work rolls and provide lubrication for the product in contact with the work rolls.

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

### (3) Emission Limits.

#### (A) Rolling Lubricants.

##### 1. Cold rolling mill.

A. Rolling lubricants used on the cold mill shall consist of low vapor pressure lubricants composed of saturated oils and additives. For purposes of this subparagraph, low vapor pressure shall be defined as less than 1.0 mm Hg at one hundred degrees Fahrenheit (100°F).

B. The initial and final boiling points of the as-received oils shall be between three hundred eighty degrees Fahrenheit (380°F) and six hundred fifty degrees Fahrenheit (650°F).

C. The initial boiling point of the as-applied rolling lubricants shall be greater than three hundred eighty degrees Fahrenheit (380°F).

D. The inlet or as-applied rolling lubricant temperatures at each mill shall not exceed one hundred fifty-five degrees Fahrenheit (155°F) and such temperatures shall be monitored at all times that the mill is in operation.

##### 2. Intermediate and finishing mills.

A. Rolling lubricants used on the intermediate and finish mills shall consist of low vapor pressure lubricants composed of saturated oils and additives. For purposes of this subparagraphs, low vapor pressure shall be defined as less than 1.0 mm Hg at one hundred degrees Fahrenheit (100°F).

B. The initial and final boiling points of the as-received oils shall be between three hundred thirty-five degrees Fahrenheit (335°F) and four hundred twenty-five degrees Fahrenheit (425°F).

C. The initial boiling point of the as-applied rolling lubricants shall be greater than three hundred degrees Fahrenheit (300°F).

D. The inlet or as-applied rolling lubricant temperatures at each mill shall not

exceed one hundred sixty degrees Fahrenheit (160°F) and such temperatures shall be monitored at all times that the mill is in operation.

#### (B) Large Emission Sources.

1. For any rolling mill that has ever had actual VOC emissions equal to or greater than one thousand (1000) tons per calendar year—

A. Emissions capture methods and emissions control equipment must be installed and used, which will result in an overall VOC emission reduction of at least eighty percent (80%).

B. An affected facility shall submit a compliance plan that details how the required VOC emissions will be controlled. The compliance plan shall include:

(I) A physical description and the operating characteristics of the rolling mill;

(II) A physical description of the capture methods to be used and the operating characteristics and design specifications of the control equipment;

(III) Expected annual quantities of material throughputs to the mill and the control equipment;

(IV) Potential VOC emissions, expected actual VOC emissions from the mill, both controlled and uncontrolled, and total operating hours from the two (2) previous calendar years to be used as a baseline for determination of overall emissions reductions;

(V) Proposed methods of testing, monitoring, recordkeeping and reporting for determining compliance with this rule;

(VI) A compliance schedule detailing all important interim dates up to and including final compliance testing; and

(VII) Any additional information as requested by the director.

C. The compliance plan shall be submitted to the director no later than sixty (60) days after the effective date of this rule.

D. The compliance plan shall be subject to the approval of the director.

##### 2. Contingency plans.

A. Should an affected facility not be able to meet the overall eighty percent (80%) VOC emission reduction, the facility must develop and submit a plan detailing corrective actions to obtain VOC emission reductions equivalent to the shortfall. The contingency plans shall be submitted to the director for approval.

B. The contingency plan shall include the following:

(I) The total VOC emission reductions that will be achieved by the plan;

(II) The emission reduction method of control that will be used to make up for any shortfall in the original compliance plan;

(III) Proposed method of record-keeping; and

(IV) A proposed implementation schedule.

C. The contingency plan shall be submitted no later than one hundred twenty (120) days after a determination is made that the compliance plan does not meet the eighty percent (80%) emission reduction.

#### (4) Recordkeeping.

##### (A) For cold rolling mills—

1. Records of rolling lubricant formulations with identification of all oils and additives shall be maintained;

2. Records of the initial and final boiling points of all as-received oil shipments shall be maintained;

3. Records of the initial boiling points of the as-applied rolling lubricant shall be maintained on a monthly basis;

4. The temperature of the as-applied rolling lubricant shall be continuously recorded; and

5. All records of rolling lubricant formulations, distillation tests for oils, and as-applied rolling lubricants and rolling lubricant temperatures shall be retained for a period of at least three (3) years and be immediately available for inspection upon request by the department or any agency with proper authority.

##### (B) For intermediate and finishing mills—

1. Records of rolling lubricant formulations with identification of all oils and additives shall be maintained;

2. Records of the initial and final boiling points of all as-received oil shipments shall be maintained;

3. Records of the initial boiling points of the as-applied rolling lubricant shall be maintained on a monthly basis;

4. The temperature of the as-applied rolling lubricant shall be continuously recorded; and

5. All records of rolling lubricant formulations, distillation tests for oils, and as-applied rolling lubricants and rolling lubricant temperatures shall be retained for a period of at least three (3) years and be immediately available for inspection upon request by the department of any agency with proper authority.

#### (5) Determination of Compliance.

(A) All incoming shipments of oil shall be sampled and a distillation range test shall be performed using Association of Standard Testing and Materials (ASTM) methods D86-73, Standard Method for Distillation of Petroleum Products or other methods approved by the director. The results of such



tests shall be used for compliance with subparagraph (3)(A)1.B. and subparagraph (3)(A)2.B.

(B) A grab sample of the as-applied rolling lubricants shall be taken on a monthly basis from each mill during any month that a mill is in operation. A distillation range test shall be performed using ASTM methods. The results of such tests shall be used to determine compliance with subparagraphs (3)(A)1.C. and (3)(A)2.C.

(C) Compliance with subparagraphs (3)(A)1.D. and (3)(A)2.D. shall be met with continuous monitoring and recording of the rolling lubricant temperature.

(D) Determination of the eighty percent (80%) emission reduction requirement in subparagraph (3)(B)1.A. shall be determined through control efficiency emissions testing.

*AUTHORITY: section 643.050, RSMo 1994. \*Emergency rule filed March 15, 1995, effective March 25, 1995, expired July 11, 1995. Original rule filed March 15, 1995, effective Nov. 30, 1995.*

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

#### 10 CSR 10-5.455 Control of Emission from Solvent Cleanup Operations

*PURPOSE: This rule will reduce solvent emissions from solvent cleanup operations.*

*PUBLISHER'S NOTE: The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.*

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

(2) Applicability.

(A) This rule shall apply throughout St. Louis City and the Counties of Jefferson, St. Charles, Franklin, and St. Louis.

(B) This rule shall apply to any person who performs or allows the performance of any cleaning operation involving the use of a volatile organic compound (VOC) solvent or solvent solution. The provisions of this rule shall not apply to any stationary source at which cleaning solvent VOCs are emitted at less than five hundred (500) pounds per day.

(C) The following cleaning operations are not subject to the provisions of this rule:

1. Cold cleaner;
2. Open top vapor degreaser;
3. ConveyORIZED cold cleaner;
4. ConveyORIZED vapor degreaser;
5. Nonmanufacturing area cleaning. Nonmanufacturing areas include cafeterias, laboratories, pilot facilities, restrooms, and office buildings;
6. Cleaning operations for which there has been made a best available control technology (BACT), reasonably available control technology (RACT), or lowest achievable emission rate (LAER) determination; and
7. Cleaning operations which are subject to the Aerospace National Emission Standards for Hazardous Air Pollutants Standards (NESHAP) source category.

(3) General Provisions. Any person performing any industrial cleaning operation, not excluded in subsection (2)(B) or (C), involving the use of a VOC solvent or solvent solution shall demonstrate a thirty percent (30%) reduction in plant-wide industrial VOC cleaning solvent emissions as described in section (4) of this rule by May 31, 1996.

(4) Solvent Emission Reduction. The following provisions apply to any stationary source subject to section (3) of this rule:

(A) A thirty percent (30%) emission reduction shall be based on emissions in 1990 and in 1995. If the owner/operator demonstrates that either 1990 or 1995 is not a representative production year, then a demonstration shall be made to the agency that another year is more representative for purposes of comparison or for prorating cleaning solvent usage. The following applicable documentation of actions and associated emission reductions shall be sent to the department for approval by March 1, 1996:

1. Changes in cleaning solvents used;
  2. Changes in work practices; and
  3. Changes in equipment or processes;
- and

(B) The changes described in subsection (4)(A) of this rule shall remain in effect until other changes resulting in greater, or equal, emission reductions from the cleaning operations are implemented.

(5) Recordkeeping. The person responsible for industrial cleaning operations at an affected facility seeking to comply with section (3) of this rule shall keep records of information sufficient for the calculation of emissions from each Unit Operation System (UOS) from the use of industrial cleaning solvents. A UOS consists of an industrial cleaning

operation around which all organic solvent usage disposal, and fugitive losses may be calculated using a simple mass balance equation. As an aid to compliance with this section, records for industrial cleaning UOSs may include one (1) or more of the following:

(A) Engineering drawings or sketches of all UOSs used to define industrial cleaning operations within the facility, including a system boundary, organic solvent input(s), organic solvent output(s), and organic solvent evaporative loss points. These drawings shall include each of the following:

1. Labeled boxes within the system boundary which describe all components of the UOS, including any virgin solvent containers, solvent applicators, used solvent containers, and the surface being cleaned;
2. Numbered or lettered arrows depicting liquid and/or evaporative solvent flow, accurate with respect to relative mass flow rates in and out of the system boundary; and
3. Arrows depicting all organic solvent pathways within the system boundary;

(B) One (1) accurate mass balance equation for each UOS depicted in subsection (5)(A) of this rule. Each equation shall have variables consistent with those used to define the corresponding UOS and shall be solved for total VOC emissions for the UOS; and

(C) Any assumptions or approximations made in defining the UOSs.

*AUTHORITY: section 643.050, RSMo Supp. 1995. \*Original rule filed Oct. 7, 1994, effective May 28, 1995. Amended: Filed July 15, 1996, effective Feb. 28, 1997.*

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

#### 10 CSR 10-5.480 Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded, or Approved Under Title 23 U.S.C. or the Federal Transit Laws

*PURPOSE: This rule implements section 176(c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et. seq.), and the related requirements of 23 U.S.C. 109(j), with respect to the conformity of transportation plans, programs, and projects which are developed, funded, or approved by the United States Department of Transportation (DOT), and by metropolitan planning organizations (MPOs) or other recipients of funds under Title 23 U.S.C. or the Federal Transit Laws (49 U.S.C. Chapter 53). This rule sets forth policy, criteria, and procedures for demonstrating and assuring conformity of such*

activities to the applicable implementation plan, developed and applicable pursuant to section 110 and part D of the CAA. This rule applies to the St. Louis ozone and carbon monoxide nonattainment areas.

**PUBLISHER'S NOTE:** The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.

(1) Definitions.

(A) Terms used but not defined in this rule shall have the meaning given them by the CAA, Titles 23 and 49 U.S.C., other United States Environmental Protection Agency (EPA) regulations, other DOT regulations, or other state or local air quality or transportation rules, in that order of priority. Definitions for some terms used in this rule may be found in 10 CSR 10-6.020.

(B) Additional definitions specific to this rule are as follows:

1. Applicable implementation plan—defined in section 302(q) of the CAA, the portion (or portions) of the state implementation plan for ozone or carbon monoxide, or most recent revision thereof, which has been approved under section 110, or promulgated under section 110(c), or promulgated or approved pursuant to regulations promulgated under section 301(d) and which implements the relevant requirements of the CAA;

2. CAA—the Clean Air Act, as amended (42 U.S.C. 7401 et seq.);

3. Cause or contribute to a new violation for a project—

A. To cause or contribute to a new violation of a standard in the area substantially affected by the project or over a region which would otherwise not be in violation of the standard during the future period in question, if the project were not implemented; or

B. To contribute to a new violation in a manner that would increase the frequency or severity of a new violation of a standard in such area;

4. Clean data—air quality monitoring data determined by EPA to meet the requirements of 40 CFR part 58 that indicate attainment of the national ambient quality standard;

5. Consultation—in the transportation conformity process, one (1) party confers with another identified party, provides all

information to that party needed for meaningful input, and considers the views of that party and responds to those views in a timely, substantive written manner prior to any final decision on such action. Such views and written response shall be made part of the record of any decision or action;

6. Control strategy implementation plan revision—the implementation plan which contains specific strategies for controlling the emissions of and reducing ambient levels of pollutants in order to satisfy CAA requirements for demonstrations of reasonable further progress and attainment (CAA sections 182(b)(1), 182(c)(2)(A), 182(c)(2)(B), 187(a)(7), 189(a)(1)(B), and 189(b)(1)(A); and sections 192 (a) and 192(b), for nitrogen dioxide);

7. Design concept—the type of facility identified by the project, e.g., freeway, expressway, arterial highway, grade-separated highway, reserved right-of-way rail transit, mixed traffic rail transit, exclusive busway, etc.;

8. Design scope—the design aspects which will affect the proposed facility's impact on regional emissions, usually as they relate to vehicle or person carrying capacity and control, e.g., number of lanes or tracks to be constructed or added, length of project, signalization, access control including approximate number and location of interchanges, preferential treatment for high-occupancy vehicles, etc.;

9. DOT—the United States Department of Transportation;

10. EPA—the Environmental Protection Agency;

11. FHWA—the Federal Highway Administration of DOT;

12. FHWA/FTA project—for the purpose of this rule, any highway or transit project which is proposed to receive funding assistance and approval through the Federal-Aid Highway program or the Federal mass transit program, or requires Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) approval for some aspect of the project, such as connection to an interstate highway or deviation from applicable design standards on the interstate system;

13. Forecast period—with respect to a transportation plan, the period covered by the transportation plan pursuant to 23 CFR part 450;

14. FTA—the Federal Transit Administration of DOT;

15. Highway project—an undertaking to implement or modify a highway facility or highway-related program. Such an undertaking consists of all required phases necessary

for implementation. For analytical purposes, it must be defined sufficiently to—

A. Connect logical *termini* and be of sufficient length to address environmental matters on a broad scope;

B. Have independent utility or significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and

C. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements;

16. Horizon year—a year for which the transportation plan describes the envisioned transportation system according to section (6) of this rule;

17. Hot-spot analysis—an estimation of likely future localized CO and PM<sub>10</sub> pollutant concentrations and a comparison of those concentrations to the national ambient air quality standard(s). Hot-spot analysis assesses impacts on a scale smaller than the entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals, and uses an air quality dispersion model to determine the effects of emissions on air quality;

18. Increase the frequency or severity—to cause a location or region to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented;

19. Lapse—the conformity determination for a transportation plan or TIP has expired, and thus there is no currently conforming transportation plan and transportation improvement program (TIP);

20. Maintenance area—any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended;

21. Maintenance plan—an implementation plan under section 175A of the CAA, as amended;

22. Metropolitan planning area—the geographic area in which the metropolitan transportation planning process required by 23 U.S.C. 134 and section 8 of the Federal Transit Act must be carried out;

23. Metropolitan planning organization (MPO)—that organization designated as being responsible, together with the state, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. 5303. It is the



forum for cooperative transportation decision-making. The East-West Gateway Coordinating Council is the MPO for the St. Louis metropolitan area and the organization responsible for conducting the planning required under section 174 of the CAA;

24. Milestone—the meaning given in sections 182(g)(1) and 189(c) of the CAA. A milestone consists of an emissions level and the date on which it is required to be achieved;

25. Motor vehicle emissions budget—that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the National Ambient Air Quality Standards (NAAQS), for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions. For purposes of meeting the conformity test required under sections (17) and/or (18) of this rule, the motor vehicle emissions budget in the applicable Missouri State Implementation Plan shall be combined with the motor vehicle emissions budget for the same pollutant in the applicable Illinois State Implementation Plan;

26. National ambient air quality standards (NAAQS)—those standards established pursuant to section 109 of the CAA;

27. NEPA—the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.);

28. NEPA process completion—for the purposes of this rule, with respect to FHWA or FTA, the point at which there is a specific action to make a determination that a project is categorically excluded, to make a Finding of No Significant Impact, or to issue a record of decision on a Final Environmental Impact Statement under NEPA;

29. Nonattainment area—any geographic region of the United States which has been designated as nonattainment under section 107 of the CAA for any pollutant for which a national ambient air quality standard exists;

30. Not classified area—any carbon monoxide (CO) nonattainment area which EPA has not classified as either moderate or serious;

31. Project—a highway project or transit project;

32. Protective finding—a determination by EPA that a submitted control strategy implementation plan revision contains adopted control measures or written commitments to adopt enforceable control measures that fully satisfy the emissions reductions requirements to the statutory provision for which the

implementation plan revision was submitted, such as reasonable further progress or attainment;

33. Recipient of funds designated under Title 23 U.S.C. or the Federal Transit Laws—any agency at any level of state, county, city, or regional government that routinely receives Title 23 U.S.C. or Federal Transit Laws funds to construct FHWA/FTA projects, operate FHWA/FTA projects or equipment, purchase equipment, or undertake other services or operations via contracts or agreements. This definition does not include private landowners or developers, or contractors or entities that are only paid for services or products created by their own employees;

34. Regionally significant project—a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals, as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum: all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel;

35. Safety margin—the amount by which the total projected emissions from all sources of a given pollutant are less than the total emissions that would satisfy the applicable requirement for reasonable further progress, attainment, or maintenance;

36. Standard—a national ambient air quality standard;

37. Statewide transportation improvement program (STIP)—a staged, multiyear, intermodal program of transportation projects which is consistent with the statewide transportation plan and planning processes and metropolitan transportation plans, TIPs and processes, developed pursuant to 23 CFR part 450;

38. Statewide transportation plan—the official statewide, intermodal transportation plan that is developed through the statewide transportation planning process, pursuant to 23 CFR part 450;

39. Transit—mass transportation by bus, rail, or other conveyance which provides general or special service to the public on a regular and continuing basis. It does not include school buses or charter or sightseeing services;

40. Transit project—an undertaking to implement or modify a transit facility or transit-related program; purchase transit vehicles or equipment; or provide financial assistance

for transit operations. It does not include actions that are solely within the jurisdiction of local transit agencies, such as changes in routes, schedules, or fares. It may consist of several phases. For analytical purposes, it must be defined inclusively enough to—

A. Connect logical *termini* and be of sufficient length to address environmental matters on a broad scope;

B. Have independent utility or independent significance, i.e., be a reasonable expenditure even if no additional transportation improvements in the area are made; and

C. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements;

41. Transportation control measure (TCM)—any measure that is specifically identified and committed to in the applicable implementation plan that is either one (1) of the types listed in section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of this rule;

42. Transportation improvement program (TIP)—a staged, multiyear, intermodal program of transportation projects covering a metropolitan planning area which is consistent with the metropolitan transportation plan, and developed pursuant to 23 CFR part 450;

43. Transportation plan—the official intermodal metropolitan transportation plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 CFR part 450;

44. Transportation project—a highway project or a transit project; and

45. Written commitment—for the purposes of this rule, a written commitment that includes a description of the action to be taken; a schedule for the completion of the action; a demonstration that funding necessary to implement the action has been authorized by the appropriating or authorizing body; and an acknowledgement that the commitment is an enforceable obligation under the applicable implementation plan.

(2) Applicability.

(A) Action Applicability.

1. Except as provided for in subsection (2)(C) or section (25), conformity determinations are required for—

A. The adoption, acceptance, approval or support of transportation plans and transportation plan amendments developed pursuant to 23 CFR part 450 or 49 CFR part 613 by a MPO or DOT;

B. The adoption, acceptance, approval or support of TIPs and TIP amendments developed pursuant to 23 CFR part 450 or 49 CFR part 613 by a MPO or DOT; and

C. The approval, funding, or implementation of FHWA/FTA projects.

2. Conformity determinations are not required under this rule for individual projects which are not FHWA/FTA projects. However, section (20) applies to such projects if they are regionally significant.

(B) Geographic Applicability. The provisions of this rule shall apply in the Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis nonattainment area for transportation-related criteria pollutants for which the area is designated nonattainment.

1. The provisions of this rule apply with respect to the emissions of the following criteria pollutants: ozone and carbon monoxide (CO) (The provisions of this rule shall apply in St. Louis City and that portion of St. Louis County extending north, south and west from the St. Louis City/County boundary to Interstate 270 for CO emissions).

2. The provisions of this rule apply with respect to emissions of the following precursor pollutants: volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) in ozone areas; and

3. The provisions of this rule apply to the Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis nonattainment area for twenty (20) years from the date EPA approves the area's request under section 107(d) of the CAA for redesignation to attainment, unless the applicable implementation plan specifies that the provisions of this rule shall apply for more than twenty (20) years.

(C) Limitations.

1. Projects subject to this rule for which the NEPA process and a conformity determination have been completed by DOT may proceed toward implementation without further conformity determinations unless more than three (3) years have elapsed since the most recent major step (NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates) occurred. All phases of such projects which were considered in the conformity determination are also included, if those phases were for the purpose of funding final design, right-

of-way acquisition, construction, or any combination of these phases.

2. A new conformity determination for the project will be required if there is a significant change in project design concept and scope, if a supplemental environmental document for air quality purposes is initiated, or if three (3) years have elapsed since the most recent major step to advance the project occurred.

(3) Priority. When assisting or approving any action with air quality-related consequences, FHWA and FTA shall give priority to the implementation of those transportation portions of an applicable implementation plan prepared to attain and maintain the NAAQS. This priority shall be consistent with statutory requirements for allocation of funds among states or other jurisdictions.

(4) Frequency of Conformity Determinations.

(A) Conformity determinations and conformity redeterminations for transportation plans, TIPs, and FHWA/FTA projects must be made according to the requirements of this section and the applicable implementation plan.

(B) Frequency of Conformity Determinations for Transportation Plans.

1. Each new transportation plan must be demonstrated to conform before the transportation plan is approved by the MPO or accepted by DOT.

2. All transportation plan revisions must be found to conform before the transportation plan revisions are approved by the MPO or accepted by DOT, unless the revision merely adds or deletes exempt projects listed in sections (25) and (26) and has been made in accordance with the notification provisions of subparagraph (5)(C)1.E. of this rule. The conformity determination must be based on the transportation plan and the revision taken as a whole.

3. The MPO and DOT must determine the conformity of the transportation plan no less frequently than every three (3) years. If more than three (3) years elapse after DOT's conformity determination without the MPO and DOT determining conformity of the transportation plan, the existing conformity determination will lapse.

(C) Frequency of Conformity Determinations for Transportation Improvement Programs.

1. A new TIP must be demonstrated to conform before the TIP is approved by the MPO or accepted by DOT. The conformity determination must be completed in accordance with paragraph (5)(A)1. of this rule.

2. A TIP amendment requires a new conformity determination for the entire TIP before the amendment is approved by the

MPO or accepted by DOT, unless the amendment merely adds or deletes exempt projects listed in section (25) or section (26) and has been made in accordance with the notification provisions of subparagraph (5)(C)1.E. of this rule. Any new conformity determination for a TIP amendment must be completed in accordance with paragraph (5)(A)1. of this rule.

3. The MPO and DOT must determine the conformity of the TIP no less frequently than every three (3) years. If more than three (3) years elapse after DOT's conformity determination without the MPO and DOT determining conformity of the TIP, the existing conformity determination will lapse.

4. After the MPO adopts a new or revised transportation plan, conformity of the TIP must be redetermined by the MPO and DOT within six (6) months from the date of DOT's conformity determination for the transportation plan, unless the new or revised plan merely adds or deletes exempt projects listed in sections (25) and (26) and has been made in accordance with the notification provisions of subparagraph (5)(C)1.E. of this rule. Otherwise, the existing conformity determination for the TIP will lapse.

(D) Projects. FHWA/FTA projects must be found to conform before they are adopted, accepted, approved, or funded. Conformity must be redetermined for any FHWA/FTA project if three (3) years have elapsed since the most recent major step to advance the project (NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates) occurred.

(E) Triggers for Transportation Plan and TIP Conformity Determinations. Conformity of existing transportation plans and TIPs must be redetermined within eighteen (18) months of the following, or the existing conformity determination will lapse, and no new project-level conformity determinations may be made until conformity of the transportation plan and TIP has been determined by the MPO and DOT—

1. November 24, 1993;

2. The date of the state's initial submission to EPA of each control strategy implementation plan or maintenance plan establishing a motor vehicle emissions budget;

3. EPA approval of a control strategy implementation plan revision or maintenance plan which establishes or revises a motor vehicle emissions budget;

4. EPA approval of an implementation plan revision that adds, deletes, or changes TCMs; and

5. EPA promulgation of an implementation plan which establishes or revises a motor vehicle budget or adds, deletes, or changes TCMs.

(5) Consultation.

(A) General. Procedures for interagency consultation (federal, state and local), resolution of conflicts, and public consultation are described in subsections (A) through (F) of this section. Public consultation procedures meet the requirements for public involvement in 23 CFR part 450.

1. MPOs and state departments of transportation will provide reasonable opportunity for consultation with state air agencies, local air quality and transportation agencies, DOT, and EPA, including consultation on the issues described in paragraph (C)1. of this section, before making conformity determinations.

(B) Interagency Consultation Procedures—General Factors.

1. Representatives of the MPO, state and local air quality planning agencies, state and local transportation agencies shall undertake an interagency consultation process in accordance with this section with each other and with local or regional offices of the EPA, FHWA and FTA on the development of the implementation plan, the list of TCMs in the applicable implementation plan, the unified planning work program under 23 CFR section 450.314, the transportation plan, the TIP, and any revisions to the preceding documents.

2. The state air quality agency shall be the lead agency responsible for preparing the final document or decision and for assuring the adequacy of the interagency consultation process as required by this section with respect to the development of the applicable implementation plans and control strategy implementation plan revisions and the list of TCMs in the applicable implementation plan. The MPO shall be the lead agency responsible for preparing the final document or decision and for assuring the adequacy of the interagency consultation process as required by this section with respect to the development of the unified planning work program under 23 CFR section 450.314, the transportation plan, the TIP, and any amendments or revisions thereto. The MPO shall also be the lead agency responsible for preparing the final document or decision and for assuring the adequacy of the interagency consultation process as required by this section with respect to any determinations of conformity under this rule for which the MPO is responsible.

3. In addition to the lead agencies identified in paragraph (5)(B)2., other agencies entitled to participate in any interagency consultation process under this rule include:

A. The Illinois Department of Transportation, the Missouri Department of Transportation, the Federal Highway Administra-

tion, the Federal Transit Administration, the U.S. Environmental Protection Agency, the Illinois Environmental Protection Agency and the Missouri Department of Natural Resources;

B. Local transportation agencies through the appointment of one (1) representative from local transportation agency interests on the Illinois side of the St. Louis area and the appointment of one (1) representative from local transportation agency interests on the Missouri side of the St. Louis area. The MPO and the Illinois Department of Transportation shall jointly appoint the Illinois representative, and the MPO and Missouri Department of Transportation shall jointly appoint the Missouri representative;

C. Local air quality agencies through the appointment of one (1) representative from each of the two (2) local air quality agencies. The MPO and the Missouri Department of Natural Resources shall jointly appoint the local air quality agency representatives; and

D. Local mass transit agencies through the appointment of one (1) representative from local mass transit agency interests on the Illinois side of the St. Louis area and the appointment of one (1) representative from local mass transit agency interests on the Missouri side of the St. Louis area. The MPO and the Illinois Department of Transportation shall jointly appoint the Illinois representative, and the MPO and Missouri Department of Transportation shall jointly appoint the Missouri representative;

E. Nothing in this paragraph shall preclude the authority of the lead agency listed in paragraph (5)(B)2. to involve additional agencies in the consultation process which are directly impacted by any project or action subject to this rule;

F. Representatives appointed under subparagraphs (5)(B)3.B., C., D., or E. shall not come from an agency already represented as a consulting agency under this section.

4. It shall be the responsibility of the appropriate lead agency designated in paragraph (5)(B)2. to solicit early and continuing input from all other consulting agencies, to provide those agencies with all relevant information needed for meaningful input and, where appropriate, to assure policy-level contact with those agencies. The lead agency shall, at a minimum, provide opportunities for discussion and comment in accordance with the interagency consultation procedures detailed in this section. The lead agency shall consider the views of each other consulting agency prior to making a final decision, shall respond in writing to those views and shall assure that such views and response (or

where appropriate a summary thereof) are made part of the record of any decision or action.

5. It shall be the responsibility of each agency listed in paragraph (5)(B)3. (other than the lead agency designated under paragraph (5)(B)2.) to confer with the lead agency and the other participants in the consultation process, to review and make relevant comment on all proposed and final documents and decisions in a timely manner and to attend consultation and decision meetings. To the extent requested by the lead agency or other agencies involved, or as required by other provisions of this rule, each agency shall provide timely input on any area of substantive expertise or responsibility (including planning assumptions, modeling, information on status of TCM implementation, and interpretation of regulatory or other requirements), and shall comply with any reasonable request to render such technical assistance to the lead agency as may be needed to support the development of the document or decision.

6. For documents or decisions subject to this rule for which the MPO is the designated lead agency, the MPO shall, through the regular meetings of its board of directors and committees, be the primary forum for discussion at the policy level. The MPO shall ensure that all consulting agencies are provided with opportunity to participate throughout the decision-making process including the early planning stages. The MPO shall modify or supplement its normal schedule of meetings, if needed, to provide adequate opportunity for discussion of the matters subject to this rule.

7. It shall be the responsibility of the lead agency designated under paragraph (5)(B)2. to initiate the consultation process by notifying other consulting agencies of the following:

A. The decision(s) or document(s) for which consultation is being undertaken; and

B. The proposed planning or programming process for the development of the decision(s) or document(s). The proposed planning or programming process shall include at a minimum:

(I) The roles and responsibilities of each agency at each stage in the planning process, including technical as well as policy aspects;

(II) The organizational level of regular consultation;

(III) The proposed schedule of, or process for convening, consultation meetings, including the process and assignment of responsibilities for selecting a chairperson and setting meeting agendas;

(IV) The process for circulating or otherwise making available all relevant materials in a timely fashion at each stage in the consultation process, and in particular for circulating or otherwise making available drafts of proposed documents or decisions before formal adoption or publication;

(V) The process and assignment of responsibility for maintaining an adequate record of the consultation process; and

(VI) The process for responding to the significant comments of involved agencies;

C. The consultation planning and programming process to be followed for each document or decision subject to this rule shall be determined by consensus among the consulting agencies and shall thereafter be binding on all parties until such time as it may be revised by consensus among the consulting agencies.

8. All drafts and supporting materials subject to consultation shall be provided at such level of detail as each consulting agency may need to determine its response. Any consulting agency may request, and the appropriate lead agency shall supply, supplemental information as is reasonably available for the consulting agency to determine its response.

9. The time allowed at each stage in the consultation process shall not be less than that specified by regulation or this rule, published by the lead agency in any document describing the consultation procedures to be followed under 23 CFR part 450, 40 CFR part 51 or this rule, or otherwise previously agreed by consensus of the consulting agencies. Where no such time has been specified, published or agreed to, the time shall be determined by consensus of the consulting agencies based upon the amount of material subject to consultation, the extent of prior informal or technical consultation and discussion, the nature of the decision to be made, and such other factors as are previously agreed by the consulting agencies. The time allowed for consultation shall be the same for all agencies being consulted, and any extension of time granted to one (1) agency shall also be allowed all other agencies.

10. Determining the adequacy of consultation opportunities.

A. Representatives of the consulting agencies listed in paragraph (5)(B)3. shall meet once each calendar year for the purpose of reviewing the sequence and adequacy of the consultation planning and programming processes established or proposed under paragraph (5)(B)7. for each type of document or decision. Responsibility for convening this

meeting shall rest with the appropriate lead agency designated in paragraph (5)(B)2.

B. In any year (other than the first after the adoption of this rule) in which there is an agreed upon consultation planning or programming process in effect and no consulting agency has requested any change to that process, the appropriate lead agency may propose that this process remain in effect. Upon notification of acceptance of this proposal by all consulting agencies, no further action by the lead agency shall be required and the meeting and review required under subparagraph (5)(B)10.A. need not take place for that year.

11. The consultation planning and programming processes proposed and agreed to under paragraph (5)(B)7. shall comply with the following general principles:

A. Consultation shall be held early in the planning process, so as to facilitate sharing of information needed for meaningful input and to allow the consulting agencies to confer with the lead agency during the formative stages of developing any document or decision subject to this rule;

B. For conformity determinations for transportation plan revisions or TIPs, the consultation process shall, at a minimum, specifically include opportunities for the consulting agencies to confer upon the analysis required to make conformity determinations. This consultation shall normally take place at the technical level, except to the extent agreed by consensus under paragraph (5)(B)10., and shall take place prior to the consideration of draft documents or conformity determinations by the MPO;

C. For state implementation plans, the consultation process shall, at a minimum, specifically include opportunities for the consulting agencies to confer upon the motor vehicle emissions budget. This consultation shall take place at the technical and policy levels, except to the extent agreed by consensus under paragraph (5)(B)10., and shall take place prior to the consideration of the draft budget by the state air quality agency;

D. In addition to the requirements of subparagraphs (5)(B)11.B. and C., if TCMs are to be considered in transportation plans, TIPs or state implementation plans, specific opportunities to consult regarding TCMs by air quality and transportation agencies must be provided prior to the consideration of the TCMs by the appropriate lead agency; and

E. Additional consultation opportunities must be provided prior to any final action being taken by any of the lead agencies defined in paragraph (5)(B)2. on any document or decision subject to this rule. Before taking formal action to approve any plan, pro-

gram, document or other decision subject to this rule, the consulting agencies shall be given an opportunity to communicate their views in writing to the lead agency. The lead agency shall consider those views and respond in writing in a timely and appropriate manner prior to any final action. Such views and written response shall be made part of the record of the final decision or action. Opportunities for formal consulting agency comment may run concurrently with other public review time frames.

12. Consultation on planning assumptions.

A. The MPO shall convene a meeting of the consulting agencies listed in paragraph (5)(B)3. no less frequently than once each calendar year for the purpose of reviewing the planning, transportation and air quality assumptions, and models and other technical procedures in use or proposed to be used for the state implementation plan (SIP) motor vehicle emissions inventory, motor vehicle emissions budget, and conformity determinations. This meeting shall normally take place at the technical level except to the extent agreed by consensus under paragraph (5)(B)10.

B. In all years when it is intended to determine the conformity of a transportation plan revision or TIP, the meeting required in subparagraph (5)(B)12.A. shall be held before the MPO commences the evaluation of projects submitted or proposed for inclusion in the transportation plan revision or TIP, and before the annual public meeting held in accordance with 23 CFR section 450.322(c). The MPO shall consider the views of all consulting agencies before making a decision on the latest planning assumptions to be used for conformity determinations. The state air quality agencies shall consider the views of all consulting agencies before making a decision on the latest planning assumptions to be used for developing the SIP motor vehicle emissions inventory, motor vehicle emissions budget and for estimating the emissions reductions associated with TCMs.

C. It shall be the responsibility of each of the consulting agencies to advise the MPO of any pending changes to their planning assumptions or methods and procedures used to estimate travel, forecast travel demand, or estimate motor vehicle emissions. Where necessary the MPO shall convene meetings, additional to that required under subparagraph (5)(B)12.A., to share information and evaluate the potential impacts of any proposed changes in planning assumptions, methods or procedures and to exchange information regarding the timetable

and scope of any upcoming studies or analyses that may lead to future revision of planning assumptions, methods or procedures.

D. Whenever a change in air quality or transportation planning assumptions, methods or procedures is proposed that may have a significant impact on the SIP motor vehicle emissions inventory, motor vehicle emissions budget or conformity determinations, the agency proposing the change shall provide the consulting agencies an opportunity to review the basis for the proposed change. All consulting agencies shall be given at least thirty (30) days to evaluate the impact of the proposed change prior to final action by the agency proposing the change. To the fullest extent practicable, the time frame for considering and evaluating proposed changes shall be coordinated with the procedures for consultation on planning assumptions in subparagraphs (5)(B)12.A.–C.

13. A meeting that is scheduled or required for another purpose may be used for the purposes of consultation if the consultation purpose is identified in the public notice for the meeting and all consulting agencies are notified in advance of the meeting.

14. On any matter which is the subject of consultation, no consulting agency may make a final decision or move to finally approve a document subject to this rule until the expiry of the time allowed for consultation and the completion of the process notified under paragraph (5)(B)7. Notwithstanding the previous sentence, any consulting agency may make a final decision or move to finally approve a document subject to this rule if final comments on the draft document or decision have been received from all other consulting agencies. The lead agency designated under paragraph (5)(B)2. shall, in making its decision, take account of all views expressed in response to consultation.

(C) Interagency Consultation Procedures—Specific Processes. Interagency consultation procedures shall also include the following specific processes:

1. An interagency consultation process in accordance with subsection (5)(B) of this rule involving the MPO, state and local air quality planning agencies, state and local transportation agencies, the EPA and the DOT shall be undertaken for the following (except where otherwise provided, the MPO shall be responsible for initiating the consultation process):

A. Evaluating and choosing a model (or models) and associated methods and assumptions to be used in hot-spot analyses and regional emissions analyses;

B. Determining which minor arterials and other transportation projects should be

considered “regionally significant” for the purposes of regional emissions analysis (in addition to those functionally classified as principal arterial or higher or fixed guideway systems or extensions that offer an alternative to regional highway travel), and which projects should be considered to have a significant change in design concept and scope from the transportation plan or TIP;

C. Evaluating whether projects otherwise exempted from meeting the requirements of this rule under sections (25) and (26) should be treated as nonexempt in cases where potential adverse emissions impacts may exist for any reason;

D. Making a determination, required by paragraph (13)(C)1., whether past obstacles to implementation of TCMs which are behind the schedule established in the applicable implementation plan have been identified and are being overcome, and whether state and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding for TCMs over other projects within their control. This process shall also consider whether delays in TCM implementation necessitate revisions to the applicable implementation plan to remove TCMs or substitute TCMs or other emission reduction measures;

E. Notification of transportation plan or TIP revisions or amendments which merely add or delete exempt projects listed in section (25) or section (26). In any year when it is intended to prepare a transportation plan revision, TIP or TIP amendment that merely adds or deletes exempt projects, the MPO shall notify all consulting agencies in writing within seven (7) calendar days after taking action to approve such exempt projects. The notification shall include enough information about the exempt projects for the consulting agencies to determine their agreement or disagreement that the projects are exempt under section (25) or section (26) of this rule;

F. Determining whether a project is considered to be included in the regional emissions analysis supporting the currently conforming TIP’s conformity determination, even if the project is not strictly included in the TIP for the purposes of MPO project selection or endorsement, and whether the project’s design concept and scope have not changed significantly from those which were included in the regional emissions analysis, or in a manner which would significantly impact use of the facility;

G. Advising on the horizon years to be used for conformity determinations, in accordance with section (6) of this rule;

H. Advising whether the modeling methods and functional relationships used in

the model are consistent with acceptable professional practice and are reasonable for the purposes of emission estimation, as specified in section (21) of this rule;

I. Reviewing the models, databases and other requirements specified in section (22) of this rule and advising if there are grounds for recommending to the EPA regional administrator that these models, databases or requirements are inappropriate. In such an event, the consulting agencies shall propose alternative methods to satisfy the requirements for conformity in accordance with section (22);

J. Determining what forecast of vehicle miles traveled to use in establishing or tracking motor vehicle emissions budgets, developing transportation plans, TIPs or applicable implementation plans, or in making conformity determinations;

K. Determining whether the project sponsor or the MPO has demonstrated that the requirements of sections (16)–(18) are satisfied without a particular mitigation or control measure, as provided in section (24); and

L. Developing a list of TCMs to be included in the applicable implementation plan;

2. An interagency consultation process in accordance with subsection (5)(B) involving the MPO, state and local air quality planning agencies and state and local transportation agencies for the following (except where otherwise provided, the MPO shall be responsible for initiating the consultation process):

A. Evaluating events which will trigger new conformity determinations in addition to those triggering events established in section (4). Any of the consulting agencies listed in paragraph (5)(B)3. may request that the MPO initiate the interagency consultation process to evaluate an event which should, in the opinion of the consulting agency, trigger a need for a conformity determination. The MPO shall initiate appropriate consultation with the other consulting agencies in response to such request, and shall notify the consulting agencies and the requesting agency in writing of its proposed action in response to this evaluation and consultation; and

B. Consulting on the procedures to be followed in performing emissions analysis for transportation activities which cross the borders of the MPO’s region or the St. Louis nonattainment area or air basin;

3. Consultation on nonfederal projects.

A. An interagency consultation process in accordance with subsection (5)(B)



involving the MPO, state and local air quality agencies and state and local transportation agencies shall be undertaken to ensure that plans for construction of regionally significant projects which are not FHWA/FTA projects (including projects for which alternative locations, design concept and scope, or the no-build option are still being considered), including all those by recipients of funds designated under 23 U.S.C. or the Federal Transit Laws, are disclosed to the MPO on a regular basis, and to assure that any changes to those plans are immediately disclosed.

B. Notwithstanding the provisions of subparagraph (5)(C)3.A., it shall be the responsibility of the sponsor of any such regionally significant project, and of any agency that becomes aware of any such project through applications for approval, permitting or funding, to disclose such project to the MPO in a timely manner. Such disclosure shall be made not later than the first occasion on which any of the following actions is sought: any policy board action necessary for the project to proceed, the issuance of administrative permits for the facility or for construction of the facility, the execution of a contract to design or construct the facility, the execution of any indebtedness for the facility, any final action of a board, commission or administrator authorizing or directing employees to proceed with design, permitting or construction of the project, or the execution of any contract to design or construct or any approval needed for any facility that is dependent on the completion of the regionally significant project.

C. Any such regionally significant project that has not been disclosed to the MPO in a timely manner shall be deemed not to be included in the regional emissions analysis supporting the conformity determination for the TIP and shall not be consistent with the motor vehicle emissions budget in the applicable implementation plan, for the purposes of section (20) of this rule.

D. For the purposes of this section and of section (20) of this rule, the phrase adopt or approve of a regionally significant project means the first time any action necessary to authorizing a project occurs, such as any policy board action necessary for the project to proceed, the issuance of administrative permits for the facility or for construction of the facility, the execution of a contract to construct the facility, any final action of a board, commission or administrator authorizing or directing employees to proceed with construction of the project, or any written decision or authorization from the MPO that the project may be adopted or approved;

4. This interagency consultation process involving the agencies specified in paragraph (5)(B)3. shall be undertaken for assuming the location and design concept and scope of projects which are disclosed to the MPO as required by paragraph (5)(C)3. but whose sponsors have not yet decided these features in sufficient detail to perform the regional emissions analysis according to the requirements of section (21) of this rule. This process shall be initiated by the MPO;

5. The MPO shall undertake an on-going process of consultation with the agencies listed in paragraph (5)(B)3. for the design, schedule, and funding of research and data collection efforts and regional transportation model development by the MPO. This process shall, as far as practicable, be integrated with the cooperative development of the Unified Planning Work Program under 23 CFR section 450.314; and

6. This process insures providing final documents (including applicable implementation plans and implementation plan revisions) and supporting information to each agency after approval or adoption. This process is applicable to all agencies described in paragraph (A)1. of this section, including federal agencies.

(D) Record Keeping and Distribution of Final Documents.

1. It shall be the responsibility of the lead agency designated under paragraph (5)(B)2. to maintain a complete and accurate record of all agreements, planning and programming processes, and consultation activities required under this rule and to make these documents available for public inspection upon request.

2. It shall be the affirmative responsibilities of the lead agency designed under paragraph (5)(B)2. to provide to the other consulting agencies copies of any final document or final decision subject to this rule within thirty (30) days of final action by the lead agency.

(E) Resolving Conflicts.

1. Conflicts among state agencies or between state agencies and the MPO regarding a final action on any conformity determination subject to this rule shall be escalated to the governor if the conflict cannot be resolved by the heads of the involved agencies. Such agencies shall make every effort to resolve any differences, including personal meetings between the heads of such agencies or their policy-level representatives, to the extent possible.

2. It shall be the responsibility of the state air quality agency to provide timely notification to the MPO and other consulting agencies of any proposed conformity deter-

mination where the agency identifies a potential conflict which, if unresolved, would, in the opinion of the agency, justify escalation to the governor. To the extent that consultation is not otherwise required under this rule, the state air quality agency shall consult with the other agencies listed in paragraph (5)(B)3. in advance of escalating a potential conflict to the governor, and, if necessary, shall convene the meetings required under paragraph (5)(E)1. of this rule.

3. When the MPO intends to make a final determination of conformity for a transportation plan, plan revision, TIP or TIP amendment, the MPO shall first notify the director of the state air quality agency of its intention and include in that notification a written response to any comments submitted by the state air quality agency on the proposed conformity determination. Upon receipt of such notification (including the written response to any comments submitted by the state air quality agency), the state air quality agency shall have fourteen (14) calendar days in which to appeal a proposed determination of conformity to the governor. If the Missouri air quality agency appeals to the governor of Missouri, the final conformity determination will automatically become contingent upon concurrence of the governor of Missouri. If the Illinois air quality agency presents an appeal to the governor of Missouri regarding a conflict involving both Illinois and Missouri agencies or the MPO, the final conformity determination will automatically become contingent upon concurrence of both the governor of Missouri and the governor of Illinois. The state air quality agency shall provide notice of any appeal under this subsection to the MPO, the state transportation agency and the Illinois air quality agency. If neither state air quality agency appeals to the governor(s) within fourteen (14) days of receiving written notification, the MPO may proceed with the final conformity determination.

4. The governor may delegate the role of hearing any such appeal under this subsection and of deciding whether to concur in the conformity determination to another official or agency within the state, but not to the head or staff of the state air quality agency or any local air quality agency, the state department of transportation, a state transportation commission or board, any agency that has responsibility for only one (1) of these functions, or an MPO.

(F) Interagency Consultation Procedures—Public Involvement.

1. The MPO shall establish and implement a proactive public involvement process which provides opportunity for public review



and comment prior to taking formal action on a conformity determination for a transportation plan revision or a TIP. This process shall be consistent with the requirements of 23 CFR part 450, including sections 450.316(b)(1), 450.322(c) and 450.324(c).

2. The public involvement process may be fully integrated with the public involvement process for transportation plans and TIPs publicized under 23 CFR section 450.316(b)(1)(i) or may be established independently. In the case of an independent procedure, there shall be a minimum public comment period of forty-five (45) days before the public involvement process is initially adopted or revised. In either case, the following criteria shall apply:

A. The MPO shall provide timely information about the conformity process to interested parties and segments of the community potentially affected by conformity determinations or by programs and policies proposed to ensure conformity, and to the public in general;

B. The public shall be assured reasonable access to technical and policy information considered by the agency at the beginning of the public comment period and prior to taking formal action on a conformity determination for all transportation plans and TIPs, consistent with these requirements and those of 23 CFR 450.316(b);

C. The MPO shall ensure adequate public notice of public involvement activities and shall allow time for public review and comment at key decision points including, but not limited to, any proposed determination of conformity;

D. The MPO shall demonstrate explicit consideration and response to public input received during the conformity determination process. When significant written and oral comments are received on a proposed determination of conformity as a result of the public involvement process, a summary, analysis and report on the disposition of comments shall be made part of the final conformity determination;

E. The MPO shall specifically address in writing all public comments that known plans for a regionally significant project which is not receiving FHWA or FTA funding or approval have not been properly reflected in the emissions analysis supporting a proposed conformity finding for a transportation plan or TIP; and

F. The MPO will, when imposing any charges for public inspections and copying, be consistent with the fee schedule contained in 49 CFR 7.95.

3. The MPO and other agencies involved in conformity determinations shall

also provide opportunity for public involvement in conformity determinations for projects to the extent otherwise required by law.

4. At such times as the MPO proposes to adopt or revise the public involvement process under paragraph (5)(F)2., the MPO shall consult with the agencies listed in paragraph (5)(B)3. on that public involvement process as it relates to conformity determinations. A minimum of forty-five (45) days shall be allowed for these agencies to respond. The MPO shall consider all comments made by the consulting agencies and shall provide each agency with a written statement of its response before moving to adopt the revised public involvement process.

5. In the first year after the adoption of this rule, if there is an approved public involvement process in force and the MPO has not proposed to revise that process, any consulting agency may request such a revision. The MPO shall consider this request and provide a written statement of its response to the requesting agency and other interested parties.

#### (6) Content of Transportation Plans.

(A) Transportation Plans Adopted after January 1, 1997, in Serious, Severe, or Extreme Ozone Nonattainment Areas and in Serious Carbon Monoxide Nonattainment Areas. If the metropolitan planning area contains and urbanized area population greater than two hundred thousand (>200,000), the transportation plan must specifically describe the transportation system envisioned for certain future years which shall be called horizon years.

1. The agency or organization developing the transportation plan, after consultation in accordance with section (5), may choose any years to be horizon years, subject to the following restrictions:

A. Horizon years may be no more than ten (10) years apart;

B. The first horizon year may be no more than ten (10) years from the base year used to validate the transportation demand planning model;

C. If the attainment year is in the time span of the transportation plan, the attainment year must be a horizon year; and

D. The last horizon year must be the last year of the transportation plan's forecast period.

2. For these horizon years—

A. The transportation plan shall quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts, in accordance with implementation

plan provisions and the consultation requirements specified by section (5);

B. The highway and transit system shall be described in terms of the regionally significant additions or modifications to the existing transportation network which the transportation plan envisions to be operational in the horizon years. Additions and modifications to the highway network shall be sufficiently identified to indicate intersections with existing regionally significant facilities, and to determine their effect on route options between transportation analysis zones. Each added or modified highway segment shall also be sufficiently identified in terms of its design concept and design scope to allow modeling of travel times under various traffic volumes, consistent with the modeling methods for area-wide transportation analysis in use by the MPO. Transit facilities, equipment, and services envisioned for the future shall be identified in terms of design concept, design scope, and operating policies that are sufficient for modeling of their transit ridership. Additions and modifications to the transportation network shall be described sufficiently to show that there is a reasonable relationship between expected land use and the envisioned transportation system; and

C. Other future transportation policies, requirements, services, and activities, including intermodal activities, shall be described.

(B) Moderate Areas Reclassified to Serious. Ozone or CO nonattainment areas which are reclassified from moderate to serious and have an urbanized population greater than two hundred thousand (>200,000), must meet the requirements of subsection (6)(A) of this rule within two (2) years from the date of reclassification.

(C) Transportation Plans for Other Areas. Transportation plans for other areas must meet the requirements of subsection (6)(A) of this rule at least to the extent it has been the previous practice of the MPO to prepare plans which meet those requirements. Otherwise, transportation plans must describe the transportation system envisioned for the future must be sufficiently described within the transportation plans so that a conformity determination can be made according to the criteria and procedures of sections (9)–(18).

(D) Savings. The requirements of this section supplement other requirements of applicable law or regulation governing the format or content of transportation plans.

(7) Relationship of Transportation Plan and TIP Conformity With the NEPA Process. The degree of specificity required in the transportation plan and the specific travel network

assumed for air quality modeling do not preclude the consideration of alternatives in the NEPA process or other project development studies. Should the NEPA process result in a project with design concept and scope significantly different from that in the transportation plan or TIP, the project must meet the criteria in sections (9)–(18) for projects not from a TIP before NEPA process completion.

(8) Fiscal Constraints for Transportation Plans and TIPs. Transportation plans and TIPs must be fiscally constrained consistent with DOT’s metropolitan planning regulations at 23 CFR part 450 as in effect on the date of adoption of this rule in order to be found in conformity. The determination that a transportation plan or TIP is fiscally constrained shall be subject to consultation in accordance with section (5) of this rule.

(9) Criteria and Procedures for Determining Conformity of Transportation Plans, Programs, and Projects—General.

(A) In order for each transportation plan, program, and FHWA/FTA project to be found to conform, the MPO and DOT must demonstrate that the applicable criteria and procedures in sections (10)–(18) as listed in Table 1 in subsection (9)(B) of this rule are satisfied, and the MPO and DOT must comply with all applicable conformity requirements of implementation plans and this rule and of court orders for the area which pertain specifically to conformity. The criteria for making conformity determinations differ based on the action under review (transportation plans, TIPs, and FHWA/FTA projects), the relevant pollutant(s), and the status of the implementation plan.

(B) The following table indicates the criteria and procedures in sections (10)–(18) which apply for transportation plans, TIPs, and FHWA/FTA projects. Subsection (C) of this section explains when budget and emission reduction tests are required for ozone nonattainment and maintenance areas. Subsection (D) of this section explains when budget and emission reduction tests are required for CO nonattainment and maintenance areas. Table 1 follows:

**Table 1—Conformity Criteria**

**All Actions at all times—**

|              |                             |
|--------------|-----------------------------|
| Section (10) | Latest planning assumptions |
| Section (11) | Latest emissions model      |
| Section (12) | Consultation                |

**Transportation Plan—**

|                    |  |
|--------------------|--|
| Subsection (13)(B) | TCMs                                   |
| Section (17) or    |  |
| Section (18)       | Emissions budget or Emission reduction |

**TIP—**

|                    |  |
|--------------------|--|
| Subsection (13)(C) | TCMs                                   |
| Section (17) or    |  |
| Section (18)       | Emissions budget or Emission reduction |

**Project (From a Conforming Plan and TIP)—**

|              |  |
|--------------|--|
| Section (14) | Currently conforming plan and TIP      |
| Section (15) | Project from a conforming plan and TIP |
| Section (16) | CO and PM <sub>10</sub> hot spots.     |

**Project (Not From a Conforming Plan and TIP)—**

|                    |  |
|--------------------|--|
| Subsection (13)(D) | TCMs                                   |
| Section (14)       | Currently conforming plan and TIP      |
| Section (16)       | CO and PM <sub>10</sub> hot spots      |
| Section (17) or    |  |
| Section (18)       | Emissions budget or Emission reduction |

(C) Ozone Nonattainment and Maintenance Areas. In addition to the criteria listed in Table 1 in subsection (B) of this section that are required to be satisfied at all times, in ozone nonattainment and maintenance areas conformity determinations must include a demonstration that the budget and/or emission reduction tests are satisfied as described in the following:

1. In ozone nonattainment and maintenance areas the budget test must be satisfied as required by section (17) for conformity determinations made—

A. Forty-five (45) days after a control strategy implementation plan revision or maintenance plan has been submitted to EPA, unless EPA has declared the motor vehicle emissions budget inadequate for transportation conformity purposes; or

B. After EPA has declared that the motor vehicle emissions budget in a submitted control strategy implementation plan revision or maintenance plan is adequate for transportation conformity purposes.

2. In ozone nonattainment areas that are required to submit a control strategy implementation plan revision (usually moderate and above areas), the emission reduction tests must be satisfied as required by section (18) for conformity determinations made—

A. During the first forty-five (45) days after a control strategy implementation plan revision or maintenance plan has been submitted to EPA, unless EPA has declared a motor vehicle emissions budget adequate for transportation conformity purposes; or

B. If EPA has declared the motor vehicle emissions budget in a submitted control strategy implementation plan revision or maintenance plan inadequate for transportation conformity purposes, and there is no previously established motor vehicle emissions budget in the approved implementation plan

or a previously submitted control strategy implementation plan revision or maintenance plan.

3. An ozone nonattainment area must satisfy the emission reduction test for NO<sub>x</sub> as required by section (18), if the implementation plan or plan submission that is applicable for the purposes of conformity determinations is a fifteen percent (15%) plan or Phase I attainment demonstration that does not include a motor vehicle emissions budget for NO<sub>x</sub>. The implementation plan will be considered to establish a motor vehicle emissions budget for NO<sub>x</sub> if the implementation plan or plan submission contains an explicit NO<sub>x</sub> motor vehicle emissions budget that is intended to act as a ceiling on future NO<sub>x</sub> emissions, and the NO<sub>x</sub> motor vehicle emissions budget is a net reduction from NO<sub>x</sub> emissions levels in 1990.

4. Ozone nonattainment areas that have not submitted a maintenance plan and that are not required to submit a control strategy implementation plan revision (usually marginal and below areas) must satisfy one of the following requirements:

A. The emission reduction tests required by section (18); or

B. The state shall submit to EPA an implementation plan revision that contains motor vehicle emissions budget(s) and an attainment demonstration, and the budget test required by section (17) must be satisfied using the submitted motor vehicle emissions budget(s) (as described in paragraph (C)1. of this section).

5. Notwithstanding paragraphs (C)1. and (C)2. of this section, moderate and above ozone nonattainment areas with three (3) years of clean data that have not submitted a maintenance plan and that EPA has determined are not subject to the Clean Air Act reasonable further progress and attainment demonstration requirements must satisfy one of the following requirements:

A. The emission reduction tests as required by section (18);

B. The budget test as required by section (17), using the motor vehicle emissions budgets in the submitted control strategy implementation plan (subject to the timing requirements of paragraph (C)1. of this section); or

C. The budget test as required by section (17), using the motor vehicle emissions of ozone precursors in the most recent year of clean data as motor vehicle emissions budgets, if such budgets are established by the EPA rulemaking that determines that the area has clean data.

(D) CO nonattainment and maintenance areas. In addition to the criteria listed in Table 1 in subsection (B) of this section that are required to be satisfied at all times, in CO nonattainment and maintenance areas conformity determinations must include a demonstration that the hot spot, budget and/or emission reduction tests are satisfied as described in the following:

1. FHWA/FTA projects in CO nonattainment or maintenance areas must satisfy the hot spot test required by section (16) at all times. Until a CO attainment demonstration or maintenance plan is approved by EPA, FHWA/FTA projects must also satisfy the hot spot test required by subsection (16)(B).

2. In CO nonattainment and maintenance areas the budget test must be satisfied as required by section (17) for conformity determinations made—

A. Forty-five (45) days after a control strategy implementation plan revision or maintenance plan has been submitted to EPA, unless EPA has declared the motor vehicle emissions budget inadequate for transportation conformity purposes; or

B. After EPA has declared that the motor vehicle emissions budget in a submitted control strategy implementation plan revision or maintenance plan is adequate for transportation conformity purposes.

3. Except as provided in paragraph (D)4. of this section, in CO nonattainment areas the emission reduction tests must be satisfied as required by section (18) for conformity determinations made—

A. During the first forty-five (45) days after a control strategy implementation plan revision or maintenance plan has been submitted to EPA, unless EPA has declared a motor vehicle emissions budget adequate for transportation conformity purposes; or

B. If EPA has declared the motor vehicle emissions budget in a submitted control strategy implementation plan revision or maintenance plan inadequate for transportation conformity purposes, and there is no previously established motor vehicle emissions budget in the approved implementation plan or a previously submitted control strategy implementation plan revision or maintenance plan.

4. CO nonattainment areas that have not submitted a maintenance plan and that are not required to submit an attainment demonstration (e.g., moderate CO areas with a design value of 12.7 ppm or less or not classified CO areas) must satisfy one of the following requirements:

A. The emissions reduction tests required by section (18); or

B. The state shall submit to EPA an implementation plan revision that contains motor vehicle emissions budget(s) and an attainment demonstration, and the budget test required by section (17) must be satisfied using the submitted motor vehicle emissions budget(s) (as described in paragraph (D)2. of this section).

(10) Criteria and Procedures—Latest Planning Assumptions.

(A) The conformity determination, with respect to all other applicable criteria in sections (11)–(18), must be based upon the most recent planning assumptions in force at the time of the conformity determination. The conformity determination must satisfy the requirements of subsections (10)(B)–(F).

(B) Assumptions (including, but not limited to, vehicle miles traveled per capita or per household or per vehicle, trip generation per household, vehicle occupancy, household size, vehicle fleet mix, vehicle ownership, and the geographic distribution of population growth) must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO. The conformity determination must also be based on the latest assumptions about current and future background concentrations. Any revisions to these estimates used as part of the conformity determination, including projected shifts in geographic location or level of population, employment, travel, and congestion, must be approved by the MPO, and shall be subject to consultation in accordance with section (5).

(C) The conformity determination for each transportation plan and TIP must discuss how transit operating policies (including fares and service levels) and assumed transit ridership have changed since the previous conformity determination.

(D) The conformity determination must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time.

(E) The conformity determination must use the latest existing information regarding the effectiveness of the TCMs and other implementation plan measures which have already been implemented.

(F) Key assumptions shall be specified and included in the draft documents and supporting materials used for the interagency and public consultation required by section (5).

(11) Criteria and Procedures—Latest Emissions Model.

(A) The conformity determination must be based on the latest emission estimation model available. This criterion is satisfied if the most current version of the motor vehicle emissions model specified by EPA for use in the preparation or revision of implementation plans in that state or area is used for the conformity analysis.

(B) EPA will consult with DOT to establish a grace period following the specification of any new model.

1. The grace period will be no less than three (3) months and no more than twenty-four (24) months after notice of availability is published in the *Federal Register*.

2. The length of the grace period will depend on the degree of change in the model and the scope of re-planning likely to be necessary by MPOs in order to assure conformity. If the grace period will be longer than three (3) months, EPA will announce the appropriate grace period in the *Federal Register*.

(C) Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the grace period or before the *Federal Register* notice of availability of the latest emission model may continue to use the previous version of the model. Conformity determinations for projects may also be based on the previous model if the analysis was begun during the grace period or before the *Federal Register* notice of availability, and if the final environmental document for the project is issued no more than three (3) years after the issuance of the draft environmental document.

(12) Criteria and Procedures—Consultation. Conformity must be determined according to the consultation procedures in this rule and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450. Until the implementation plan is fully approved by EPA, the conformity determination must be made according to paragraph (5)(A)2. and subsection (5)(E) and the requirements of 23 CFR part 450.

(13) Criteria and Procedures—Timely Implementation of TCMs.

(A) The transportation plan, TIP, or any FHWA/FTA project which is not from a conforming plan and TIP must provide for the timely implementation of TCMs from the applicable implementation plan.

(B) For transportation plans, this criterion is satisfied if the following two (2) conditions are met:

1. The transportation plan, in describing the envisioned future transportation system,

provides for the timely completion or implementation of all TCMs in the applicable implementation plan which are eligible for funding under Title 23 U.S.C. or the Federal Transit Laws, consistent with schedules included in the applicable implementation plan; and

2. Nothing in the transportation plan interferes with the implementation of any TCM in the applicable implementation plan.

(C) For TIPs, this criterion is satisfied if the following conditions are met:

1. An examination of the specific steps and funding source(s) needed to fully implement each TCM indicates that TCMs which are eligible for funding under Title 23 U.S.C. or the Federal Transit Laws, are on or ahead of the schedule established in the applicable implementation plan, or, if such TCMs are behind the schedule established in the applicable implementation plan, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome, and that all state and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding of TCMs over other projects within their control, including projects in locations outside the nonattainment or maintenance area.

2. If TCMs in the applicable implementation plan have previously been programmed for federal funding but the funds have not been obligated and the TCMs are behind the schedule in the implementation plan, then the TIP cannot be found to conform if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than projects which are eligible for federal funding intended for air quality improvement projects, e.g., the Congestion Mitigation and Air Quality Improvement Program; and

3. Nothing in the TIP may interfere with the implementation of any TCM in the applicable implementation plan.

(D) For FHWA/FTA projects which are not from a conforming transportation plan and TIP, this criterion is satisfied if the project does not interfere with the implementation of any TCM in the applicable implementation plan.

(14) Criteria and Procedures—Currently Conforming Transportation Plan and TIP. There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

(A) Only one (1) conforming transportation plan or TIP may exist in an area at any time; conformity determinations of a previous transportation plan or TIP expire once the current plan or TIP is found to conform by DOT. The conformity determination on a transportation plan or TIP will also lapse if conformity is not determined according to the frequency requirements specified in section (4) of this rule.

(B) This criterion is not required to be satisfied at the time of project approval for a TCM specifically included in the applicable implementation plan, provided that all other relevant criteria of this subsection are satisfied.

(15) Criteria and Procedures—Projects From a Plan and TIP.

(A) The project must come from a conforming plan and program. If this criterion is not satisfied, the project must satisfy all criteria in Table 1 of subsection (9)(B) for a project not from a conforming transportation plan and TIP. A project is considered to be from a conforming transportation plan if it meets the requirements of subsection (15)(B) of this rule and from a conforming program if it meets the requirements of subsection (15)(C) of this rule. Special provisions for TCMs in an applicable implementation plan are provided in subsection (15)(D) of this rule.

(B) A project is considered to be from a conforming transportation plan if one (1) of the following conditions applies:

1. For projects which are required to be identified in the transportation plan in order to satisfy section (6) Content of Transportation Plans of this rule, the project is specifically included in the conforming transportation plan and the project's design concept and scope have not changed significantly from those which were described in the transportation plan, or in a manner which would significantly impact use of the facility; or

2. For projects which are not required to be specifically identified in the transportation plan, the project is identified in the conforming transportation plan, or is consistent with the policies and purpose of the transportation plan and will not interfere with other projects specifically included in the transportation plan.

(C) A project is considered to be from a conforming program if the following conditions are met:

1. The project is included in the conforming TIP and the design concept and scope of the project were adequate at the time of the TIP conformity determination to determine its contribution to the TIP's regional

emissions, and the project design concept and scope have not changed significantly from those which were described in the TIP; and

2. If the TIP describes a project design concept and scope which includes project-level emissions mitigation or control measures, written commitments to implement such measures must be obtained from the project sponsor and/or operator as required by subsection (24)(A) in order for the project to be considered from a conforming program. Any change in these mitigation or control measures that would significantly reduce their effectiveness constitutes a change in the design concept and scope of the project.

(D) TCMs. This criterion is not required to be satisfied for TCMs specifically included in an applicable implementation plan.

(16) Criteria and Procedures—Localized CO Violations (Hot Spots).

(A) This subsection applies at all times. The FHWA/FTA project must not cause or contribute to any new localized CO violations or increase the frequency or severity of any existing CO violations in CO nonattainment and maintenance areas. This criterion is satisfied if it is demonstrated that no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project. The demonstration must be performed according to the consultation requirements of subparagraph (5)(C)1.A. and the methodology requirements of section (22).

(B) This subsection applies for CO nonattainment areas as described in paragraph (9)(D)1. Each FHWA/FTA project must eliminate or reduce the severity and number of localized CO violations in the area substantially affected by the project (in CO nonattainment areas). This criteria is satisfied with respect to existing localized CO violations if it is demonstrated that existing localized CO violations will be eliminated or reduced in severity and number as a result of the project. The demonstration must be performed according to the consultation requirements of subparagraph (5)(C)1.A. and the methodology requirements of section (22).

(17) Criteria and Procedures—Motor Vehicle Emissions Budget.

(A) The transportation plan, TIP, and project not from a conforming transportation plan and TIP must be consistent with the motor vehicle emissions budget(s) in the applicable implementation plan (or implementation plan submission). This criterion applies as described in subsection (9)(C).



This criterion is satisfied if it is demonstrated that emissions of the pollutants or pollutant precursors described in subsection (C) of this section are less than or equal to the motor vehicle emissions budget(s) established in the applicable implementation plan or implementation plan submission.

(B) Consistency with the motor vehicle emissions budget(s) must be demonstrated for each year for which the applicable (and/or submitted) implementation plan specifically establishes motor vehicle emissions budget(s), for the last year of the transportation plan's forecast period, and for any intermediate years as necessary so that the years for which consistency is demonstrated are no more than ten (10) years apart, as follows:

1. Until a maintenance plan is submitted—

A. Emissions in each year (such as milestone years and the attainment year) for which the control strategy implementation plan revision establishes motor vehicle emissions budget(s) must be less than or equal to that year's motor vehicle emissions budget(s); and

B. Emissions in years for which no motor vehicle emissions budget(s) are specifically established must be less than or equal to the motor vehicle emissions budget(s) established for the most recent prior year. For example, emissions in years after the attainment year for which the implementation plan does not establish a budget must be less than or equal to the motor vehicle emissions budget(s) for the attainment year.

2. When a maintenance plan has been submitted—

A. Emissions must be less than or equal to the motor vehicle emissions budget(s) established for the last year of the maintenance plan, and for any other years for which the maintenance plan establishes motor vehicle emissions budgets. If the maintenance plan does not establish motor vehicle emissions budgets for any years other than the last year of the maintenance plan, the demonstration of consistency with the motor vehicle emissions budget(s) must be accompanied by a qualitative finding that there are no factors which would cause or contribute to a new violation or exacerbate an existing violation in the years before the last year of the maintenance plan. The interagency consultation process required by section (5) shall determine what must be considered in order to make such a finding;

B. For years after the last year of the maintenance plan, emissions must be less than or equal to the maintenance plan's motor vehicle emissions budget(s) for the last year of the maintenance plan; and

C. If an approved control strategy implementation plan has established motor vehicle emissions budgets for years in the time frame of the transportation plan, emissions in these years must be less than or equal to the control strategy implementation plan's motor vehicle emissions budget(s) for these years.

(C) Consistency with the motor vehicle emissions budget(s) must be demonstrated for each pollutant or pollutant precursor in subsection (2)(B) for which the area is in nonattainment or maintenance and for which the applicable implementation plan (or implementation plan submission) establishes a motor vehicle emissions budget.

(D) Consistency with the motor vehicle emissions budget(s) must be demonstrated by including emissions from the entire transportation system, including all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the nonattainment or maintenance area in the time frame of the transportation plan.

1. Consistency with the motor vehicle emissions budget(s) must be demonstrated with a regional emissions analysis that meets the requirements of section (21) and subparagraph (5)(C)1.A.

2. The regional emissions analysis may be performed for any years in the time frame of the transportation plan provided they are not more than ten (10) years apart and provided the analysis is performed for the attainment year (if it is in the time frame of the transportation plan) and the last year of the plan's forecast period. Emissions in years for which consistency with motor vehicle emissions budgets must be demonstrated, as required in subsection (B) of this section, may be determined by interpolating between the years for which the regional emissions analysis is performed.

(E) Motor Vehicle Emissions Budgets in Submitted Control Strategy Implementation Plan Revisions and Submitted Maintenance Plans.

1. Consistency with the motor vehicle emissions budgets in submitted control strategy implementation plan revisions or maintenance plans must be demonstrated if EPA has declared the motor vehicle emissions budget(s) adequate for transportation conformity purposes, or beginning forty-five (45) days after the control strategy implementation plan revision or maintenance plan has been submitted (unless EPA has declared the motor vehicle emissions budget(s) inadequate for transportation conformity purposes). However, submitted implementation plans do not supersede the motor vehicle emissions bud-

gets in approved implementation plans for the period of years addressed by the approved implementation plan.

2. If EPA has declared an implementation plan submission's motor vehicle emissions budget(s) inadequate for transportation conformity purposes, the inadequate budget(s) shall not be used to satisfy the requirements of this section. Consistency with the previously established motor vehicle emissions budget(s) must be demonstrated. If there are no previous approved implementation plans or implementation plan submissions with motor vehicle emissions budgets, the emission reduction tests required by section (18) must be satisfied.

3. If EPA declares an implementation plan submission's motor vehicle emissions budget(s) inadequate for transportation conformity purposes more than forty-five (45) days after its submission to EPA, and conformity of a transportation plan or TIP has already been determined by DOT using the budget(s), the conformity determination will remain valid. Projects included in that transportation plan or TIP could still satisfy sections (14) and (15), which require a currently conforming transportation plan and TIP to be in place at the time of a project's conformity determination and that projects come from a conforming transportation plan and TIP.

4. EPA will not find a motor vehicle emissions budget in a submitted control strategy implementation plan revision or maintenance plan to be adequate for transportation conformity purposes unless the following minimum criteria are satisfied:

A. The submitted control strategy implementation plan revision or maintenance plan was endorsed by the governor (or his or her designee) and was subject to a state public hearing;

B. Before the control strategy implementation plan or maintenance plan was submitted to EPA, consultation among federal, state, and local agencies occurred; full implementation plan documentation was provided to EPA; and EPA's stated concerns, if any, were addressed;

C. The motor vehicle emissions budget(s) is clearly identified and precisely quantified;

D. The motor vehicle emissions budget(s), when considered together with all other emissions sources, is consistent with applicable requirements for reasonable further progress, attainment, or maintenance (whichever is relevant to the given implementation plan submission);

E. The motor vehicle emissions budget(s) is consistent with and clearly related to

the emissions inventory and the control measures in the submitted control strategy implementation plan revision or maintenance plan; and

F. Revisions to previously submitted control strategy implementation plans or maintenance plans explain and document any changes to previously submitted budgets and control measures; impacts on point and area source emissions; any changes to established safety margins (see section (1) for definition); and reasons for the changes (including the basis for any changes related to emission factors or estimates of vehicle miles traveled).

5. Before determining the adequacy of a submitted motor vehicle emissions budget, EPA will review the state's compilation of public comments and response to comments that are required to be submitted with any implementation plan. EPA will document its consideration of such comments and responses in a letter to the state indicating the adequacy of the submitted motor vehicle emissions budget.

6. When the motor vehicle emissions budget(s) used to satisfy the requirements of this section are established by an implementation plan submittal that has not yet been approved or disapproved by EPA, the MPO and DOT's conformity determinations will be deemed to be a statement that the MPO and DOT are not aware of any information that would indicate that emissions consistent with the motor vehicle emissions budget will cause or contribute to any new violation of any standard; increase the frequency or severity of any existing violation of any standard; or delay timely attainment of any standard or any required interim emission reductions or other milestones.

(18) Criteria and Procedures—Emission Reductions in Areas without Motor Vehicle Emissions Budgets.

(A) The transportation plan, TIP, and project not from a conforming transportation plan and TIP must contribute to emissions reductions. This criterion applies as described in subsection (9)(C). It applies to the net effect of the action (transportation plan, TIP, or project not from a conforming transportation plan and TIP) on motor vehicle emissions from the entire transportation system.

(B) This criterion may be met in moderate and above ozone nonattainment areas that are subject to the reasonable further progress requirements of CAA section 182(b)(1) and in moderate with design value greater than 12.7 ppm and serious CO nonattainment areas if a regional emissions analysis that satisfies the requirements of section (21) and

subsections (E) through (H) of this section demonstrates that for each analysis year and for each of the pollutants described in subsection (D) of this section—

1. The emissions predicted in the "Action" scenario are less than the emissions predicted in the "Baseline" scenario, and this can be reasonably expected to be true in the periods between the analysis years; and

2. The emissions predicted in the "Action" scenario are lower than 1990 emissions by any nonzero amount.

(C) This criterion may be met in PM<sub>10</sub> and NO<sub>2</sub> nonattainment areas; marginal and below ozone nonattainment areas and other ozone nonattainment areas that are not subject to the reasonable further progress requirements of CAA section 182(b)(1); and moderate with design value less than 12.7 ppm and below CO nonattainment areas if a regional emissions analysis that satisfies the requirements of section (21) and subsections (E) and (F) of this section demonstrates that for each analysis year and for each of the pollutants described in subsection (D) of this section, one (1) of the following requirements is met:

1. The emissions predicted in the "Action" scenario are less than the emissions predicted in the "Baseline" scenario, and this can be reasonably expected to be true in the periods between the analysis years; or

2. The emissions predicted in the "Action" scenario are not greater than baseline emissions. Baseline emissions are those estimated to have occurred during calendar year 1990, unless a conformity plan defines the baseline emissions for a PM<sub>10</sub> area to be those occurring in a different calendar year for which a baseline emissions inventory was developed for the purpose of developing a control strategy implementation plan.

(D) Pollutants. The regional emissions analysis must be performed for the following pollutants:

1. VOC in ozone areas;  
 2. NO<sub>x</sub> in ozone areas, unless the EPA administrator determines that additional reductions of NO<sub>x</sub> would not contribute to attainment;

3. CO in CO areas;  
 4. PM<sub>10</sub> in PM<sub>10</sub> areas;

5. Transportation-related precursors of PM<sub>10</sub> in PM<sub>10</sub> nonattainment and maintenance areas if the EPA regional administrator or the director of the state air agency has made a finding that such precursor emissions from within the area are a significant contributor to the PM<sub>10</sub> nonattainment problem and has so notified the MPO and DOT; and

6. NO<sub>x</sub> in NO<sub>2</sub> areas.

(E) Analysis years. The regional emissions analysis must be performed for analysis years that are no more than ten (10) years apart. The first analysis year must be no more than five (5) years beyond the year in which the conformity determination is being made. The last year of transportation plan's forecast period must also be an analysis year.

(F) "Baseline" scenario. The regional emissions analysis required by subsections (B) and (C) of this section must estimate the emissions that would result from the "Baseline" scenario in each analysis year. The "Baseline" scenario must be defined for each of the analysis years. The "Baseline" scenario is the future transportation system that will result from current programs, including the following (except that exempt projects listed in section (25) and projects exempt from regional emissions analysis as listed in section (26) need not be explicitly considered):

1. All in-place regionally significant highway and transit facilities, services and activities;

2. All ongoing travel demand management or transportation system management activities; and

3. Completion of all regionally significant projects, regardless of funding source, which are currently under construction or are undergoing right-of-way acquisition (except for hardship acquisition and protective buying); come from the first year of the previously conforming transportation plan and/or TIP; or have completed the NEPA process.

(G) "Action" scenario. The regional emissions analysis required by subsections (B) and (C) of this section must estimate the emissions that would result from the "Action" scenario in each analysis year. The "Action" scenario must be defined for each of the analysis years. The "Action" scenario is the transportation system that would result from the implementation of the proposed action (transportation plan, TIP, or project not from a conforming transportation plan and TIP) and all other expected regionally significant projects in the nonattainment area. The "Action" scenario must include the following (except that exempt projects listed in section (25) and projects exempt from regional emissions analysis as listed in section (26) need not be explicitly considered):

1. All facilities, services, and activities in the "Baseline" scenario;

2. Completion of all TCMs and regionally significant projects (including facilities, services, and activities) specifically identified in the proposed transportation plan which will be operational or in effect in the analysis year, except that regulatory TCMs may not be



assumed to begin at a future time unless the regulation is already adopted by the enforcing jurisdiction or the TCM is identified in the applicable implementation plan;

3. All travel demand management programs and transportation system management activities known to the MPO, but not included in the applicable implementation plan or utilizing any federal funding or approval, which have been fully adopted and/or funded by the enforcing jurisdiction or sponsoring agency since the last conformity determination;

4. The incremental effects of any travel demand management programs and transportation system management activities known to the MPO, but not included in the applicable implementation plan or utilizing any federal funding or approval, which were adopted and/or funded prior to the date of the last conformity determination, but which have been modified since then to be more stringent or effective;

5. Completion of all expected regionally significant highway and transit projects which are not from a conforming transportation plan and TIP; and

6. Completion of all expected regionally significant non-FHWA/FTA highway and transit projects that have clear funding sources and commitments leading toward their implementation and completion by the analysis year.

(H) Projects not from a conforming transportation plan and TIP. For the regional emissions analysis required by subsections (B) and (C) of this section, if the project which is not from a conforming transportation plan and TIP is a modification of a project currently in the plan or TIP, the "Baseline" scenario must include the project with its original design concept and scope, and the "Action" scenario must include the project with its new design concept and scope.

(19) Consequences of Controlled Strategy Implementation Plan Failures.

(A) Disapprovals.

1. If EPA disapproves any submitted control strategy implementation plan revision (with or without a protective finding) the conformity status of the transportation plan and TIP shall lapse on the date that highway sanctions as a result of the disapproval are imposed on the nonattainment area under section 179(b)(1) of the CAA. No new transportation plan, TIP, or project may be found to conform until another control strategy implementation plan revision fulfilling the same CAA requirements is submitted and conformity to this submission is determined.

2. If EPA disapproves a submitted control strategy implementation plan revision without making a protective finding, then beginning one hundred twenty (120) days after such disapproval, only projects in the first three (3) years of the currently conforming transportation plan and TIP may be found to conform. This means that beginning one hundred twenty (120) days after disapproval without a protective finding, no transportation plan, TIP, or project not in the first three (3) years of the currently conforming plan and TIP may be found to conform until another control strategy implementation plan revision fulfilling the same CAA requirements is submitted and conformity to this submission is determined. During the first one hundred twenty (120) days following EPA's disapproval without a protective finding, transportation plan, TIP, and project conformity determinations shall be made using the motor vehicle emissions budget(s) in the disapproved control strategy implementation plan revision, unless another control strategy implementation plan revision has been submitted and its motor vehicle emissions budget(s) applies for transportation conformity purposes pursuant to section (9).

3. In disapproving a control strategy implementation plan revision, EPA would give a protective finding where a submitted plan contains adopted control measures or written commitments to adopt enforceable control measures that fully satisfy the emissions reductions requirements relevant to the statutory provision for which the implementation plan revision was submitted, such as reasonable further progress or attainment.

(B) Failure to Submit and Incompleteness. In areas where EPA notifies the state, MPO, and DOT of the state's failure to submit a control strategy implementation plan or submission of an incomplete control strategy implementation plan revision, (either of which initiates the sanction process under CAA section 179 or 110(m)), the conformity status of the transportation plan and TIP shall lapse on the date that highway sanctions are imposed on the nonattainment area for such failure under section 179(b)(1) of the CAA, unless the failure has been remedied and acknowledged by a letter from the EPA regional administrator.

(C) Federal Implementation Plans. If EPA promulgates a federal implementation plan that contains motor vehicle emissions budget(s) as a result of a state failure, the conformity lapse imposed by this section because of that state failure is removed.

(20) Requirements for Adoption or Approval of Projects by Other Recipients of Funds Des-

ignated Under Title 23 U.S.C. or the Federal Transit Laws. No recipient of federal funds designated under Title 23 U.S.C. or the Federal Transit Laws shall adopt or approve a regionally significant highway or transit project, regardless of funding source, unless the recipient finds that the requirements of one of the following are met:

(A) The project was included in the first three (3) years of the most recently conforming transportation plan and TIP (or the conformity determination's regional emissions analyses), even if conformity status is currently lapsed; and the project's design concept and scope has not changed significantly from those analyses; or

(B) There is a currently conforming transportation plan and TIP, and a new regional emissions analysis including the project and the currently conforming transportation plan and TIP demonstrates that the transportation plan and TIP would still conform if the project were implemented (consistent with the requirements of sections (17) and/or (18) for a project not from a conforming transportation plan and TIP).

(21) Procedures for Determining Regional Transportation-Related Emissions.

(A) General Requirements.

1. The regional emissions analysis required by section (17) and section (18) of this rule for the transportation plan, TIP, or project not from a conforming plan and TIP must include all regionally significant projects expected in the nonattainment or maintenance area. The analysis shall include FHWA/FTA projects proposed in the transportation plan and TIP and all other regionally significant projects which are disclosed to the MPO as required by section (5) of this rule. Projects which are not regionally significant are not required to be explicitly modeled, but vehicle miles traveled (VMT) from such projects must be estimated in accordance with reasonable professional practice. The effects of TCMs and similar projects that are not regionally significant may also be estimated in accordance with reasonable professional practice.

2. The emissions analysis may not include for emissions reduction credit any TCMs or other measures in the applicable implementation plan which have been delayed beyond the scheduled date(s) until such time as their implementation has been assured. If the measure has been partially implemented and it can be demonstrated that it is providing quantifiable emission reduction benefits, the emissions analysis may include that emissions reduction credit.



3. Emissions reduction credit from projects, programs, or activities which require a regulatory action in order to be implemented may not be included in the emissions analysis unless—

A. The regulatory action is already adopted by the enforcing jurisdiction;

B. The project, program, or activity is included in the applicable implementation plan;

C. The control strategy implementation plan submission or maintenance plan submission that establishes the motor vehicle emissions budget(s) for the purposes of section (17) contains a written commitment to the project, program, or activity by the agency with authority to implement it; or

D. EPA has approved an opt-in to a federally enforced program, EPA has promulgated the program (if the control program is a federal responsibility, such as tailpipe standards), or the Clean Air Act requires the program without need for individual state action and without any discretionary authority for EPA to set its stringency, delay its effective date, or not implement the program.

4. Notwithstanding paragraph (21)(A)3. emission reduction credit from control measures that are not included in the transportation plan and TIP and that do not require a regulatory action in order to be implemented may not be included in the emissions analysis unless the conformity determination includes written commitments to implementation from appropriate entities.

A. Persons or entities voluntarily committing to control measures must comply with the obligations of such commitments.

B. Written commitments to mitigation measures must be obtained prior to a conformity determination, and project sponsors must comply with such commitments.

5. A regional emissions analysis for the purpose of satisfying the requirements of section (18) must make the same assumptions in both the “Baseline” and “Action” scenarios regarding control measures that are external to the transportation system itself, such as vehicle tailpipe or evaporative emission standards, limits on gasoline volatility, vehicle inspection and maintenance programs, and oxygenated or reformulated gasoline or diesel fuel.

6. The ambient temperatures used for the regional emissions analysis shall be consistent with those used to establish emissions budget in the applicable implementation plan. All other factors, for example the fraction of travel in a hot stabilized engine mode, must be consistent with the applicable implementation plan, unless modified after interagency consultation in accordance with subparagraph

(5)(C)1.A. to incorporate additional or more geographically specific information or represent a logically estimated trend in such factors beyond the period considered in the applicable implementation plan.

7. Reasonable methods shall be used to estimate nonattainment or maintenance area vehicle miles traveled (VMT) on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area.

(B) Regional emissions analysis in serious, severe, and extreme ozone nonattainment and serious carbon monoxide areas must meet the requirements of paragraphs (B)1. through 3. of this section if their metropolitan planning area contains an urbanized area population over two hundred thousand (200,000).

1. Beginning January 1, 1997, estimates of regional transportation-related emissions used to support conformity determinations must be made at a minimum using network-based travel models according to procedures and methods that are available and in practice and supported by current and available documentation. These procedures, methods, and practices are available from DOT and will be updated periodically. Agencies must discuss these modeling procedures and practices through the interagency consultation process, as required by subparagraph (5)(C)1.A. Network-based travel models must at a minimum satisfy the following requirements:

A. Network-based travel models must be validated against observed counts (peak and off-peak, if possible) for base year that is not more than ten (10) years prior to the date of the conformity determination. Model forecasts must be analyzed for reasonableness and compared to historical trends and other factors, and the results must be documented;

B. Land use, population, employment, and other network-based travel model assumptions must be documented and based on the best available information;

C. Scenarios of land development and use must be consistent with the future transportation system alternatives for which emissions are being estimated. The distribution of employment and residences for different transportation options must be reasonable;

D. A capacity-sensitive assignment methodology must be used, and emissions estimates must be based on a methodology which differentiates between peak and off-peak link volumes and speeds and uses of speeds based on final assigned volumes;

E. Zone-to-zone travel impedances used to distributive trips between origin and destination pairs must be in reasonable agreement with the travel times that are estimated from final assigned traffic volumes. Where

use of transit currently is anticipated to be a significant factor in satisfying transportation demand, these times should also be used for modeling mode splits; and

F. Network-based travel models must be reasonably sensitive to changes in the time(s), cost(s), and other factors affecting travel choices.

2. Reasonable methods in accordance with good practice must be used to estimate traffic speeds and delays in a manner that is sensitive to the estimated volume of travel on each roadway segment represented in the network-based travel model.

3. Highway Performance Monitoring System (HPMS) estimates of vehicle miles traveled (VMT) shall be considered the primary measure of VMT within the portion of the nonattainment or maintenance area and for the functional classes of roadways included in HPMS, for urban areas which are sampled on a separate urban area basis. For areas with network-based travel models, a factor (or factors) may be developed to reconcile and calibrate the network-based travel model estimates of VMT in the base year of its validation to the HPMS estimates for the same period. These factors may then be applied to model estimates of future VMT. In this factoring process, consideration will be given to differences between HPMS and network-based travel models, such as differences in the facility coverage of the HPMS and the modeled network description. Locally developed count-based programs and other departures from these procedures are permitted subject to the interagency consultation procedures of subparagraph (5)(C)1.A.

(C) In all areas not otherwise subject to subsection (B) of this section, regional emissions analyses must use those procedure described in subsection (B) of this section if the use of those procedures has been the previous practice of the MPO. Otherwise, areas not subject to subsection (B) of this section may estimate regional emissions using any appropriate methods that account for VMT growth by, for example, extrapolating historical VMT or projecting future VMT by considering growth in population and historical growth trends for VMT per person. These methods must also consider future economic activity, transit alternatives, and transportation system policies.

(D)  $PM_{10}$  from Construction-Related Fugitive Dust.

1. For areas in which the implementation plan does not identify construction-related fugitive  $PM_{10}$  as a contributor to the nonattainment problem, the fugitive  $PM_{10}$  emissions associated with highway and transit

project construction are not required to be considered in the regional emissions analysis.

2. In  $PM_{10}$  nonattainment and maintenance areas with implementation plans which identify construction-related fugitive  $PM_{10}$  as a contributor to the nonattainment problem, the regional  $PM_{10}$  emissions analysis shall consider construction-related fugitive  $PM_{10}$  and shall account for the level of construction activity, the fugitive  $PM_{10}$  control measures in the applicable implementation plan, and the dust-producing capacity of the proposed activities.

(E) Reliance on Previous Regional Emissions Analysis.

1. The TIP may be demonstrated to satisfy the requirements of section (17) Motor Vehicle Emissions Budget or section (18) Emissions Reductions in Areas without Motor Vehicle Emissions Budgets of this rule without new regional analysis if the regional emissions analysis already performed for the plan also applies to the TIP. This requires a demonstration that—

A. The TIP contains all projects which must be started in the TIP's time frame in order to achieve the highway and transit system envisioned by the transportation plan;

B. All TIP projects which are regionally significant are included in the transportation plan with design concept and scope adequate to determine their contribution to the transportation plan's regional emissions at the time of the transportation plan's conformity determination; and

C. The design concept and scope of each regionally significant project in the TIP is not significantly different from that described in the transportation plan.

2. A project which is not from a conforming transportation plan and a conforming TIP may be demonstrated to satisfy the requirements of section (17) or section (18) of this rule without additional regional emissions analysis if allocating funds to the project will not delay the implementation of projects in the transportation plan or TIP which are necessary to achieve the highway and transit system envisioned by the transportation plan, and if the project is either—

A. Not regionally significant; or

B. Included in the conforming transportation plan (even if it is not specifically included in the latest conforming TIP) with design concept and scope adequate to determine its contribution to the transportation plan's regional emissions at the time of the transportation plan's conformity determination, and the design concept and scope of the project is not significantly different from that described in the transportation plan.

(22) Procedures for Determining Localized CO Concentrations (Hot-Spot Analysis).

(A) CO Hot-Spot Analysis.

1. The demonstrations required by section (16) Localized CO Violations must be based on quantitative analysis using air quality models, databases, and other requirements specified in 40 CFR part 51, Appendix W Guideline on Air Quality Models. These procedures shall be used in the following cases, unless different procedures developed through the interagency consultation process required in section (5) and approved by the EPA regional administrator are used:

A. For projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation;

B. For projects affecting intersections that are at Level-of-Service D, E, or F, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes related to the project;

C. For any project affecting one or more of the top three (3) intersections in the nonattainment or maintenance area with highest traffic volumes, as identified in the applicable implementation plan; and

D. For any project affecting one or more of the top three (3) intersections in the nonattainment or maintenance area with the worst level-of-service, as identified in the applicable implementation plan.

2. In cases other than those described in paragraph (A)1. of this section, the demonstrations required by section (16) may be based on either—

A. Quantitative methods that represent reasonable and common professional practice; or

B. A quantitative consideration of local factors, if this can provide a clear demonstration that the requirements of section (16) are met.

(B) General Requirements.

1. Estimated pollutant concentrations must be based on the total emissions burden which may result from the implementation of the project, summed together with future background concentrations. The total concentrations must be estimated and analyzed at appropriate receptor locations in the area substantially affected by the project.

2. CO hot-spot analyses must include the entire project, and may be performed only after the major design features which will significantly impact CO concentrations have been identified. The future background concentration should be estimated by multiplying current background by the ratio of future to

current traffic and the ratio of future to current emission factors.

3. Hot-spot analysis assumptions must be consistent with those in the regional emissions analysis for those inputs which are required for both analyses.

4. CO mitigation or control measures shall be assumed in the hot-spot analysis only where there are written commitments from the project sponsor and/or operator to implement such measures, as required by subsection (24)(A).

5. CO hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last five (5) years or less at any individual site.

(23) Using the Motor Vehicle Emissions Budget in the Applicable Implementation Plan (or Implementation Plan Submission).

(A) In interpreting an applicable implementation plan (or implementation plan submission) with respect to its motor vehicle emissions budget(s), the MPO and DOT may not infer additions to the budget(s) that are not explicitly intended by the implementation plan (or submission). Unless the implementation plan explicitly quantifies the amount by which motor vehicle emissions could be higher while still allowing a demonstration of compliance with the milestone, attainment, or maintenance requirement and explicitly states an intent that some or all of this additional amount should be available to the MPO and DOT in the emission budget for conformity purposes, the MPO may not interpret the budget to be higher than the implementation plan's estimate of future emissions. This applies in particular to applicable implementation plans (or submissions) which demonstrate that after implementation of control measures in the implementation plan—

1. Emissions from all sources will be less than the total emissions that would be consistent with a required demonstration of an emissions reduction milestone;

2. Emissions from all sources will result in achieving attainment prior to the attainment deadline and/or ambient concentrations in the attainment deadline year will be lower than needed to demonstrate attainment; or

3. Emissions will be lower than needed to provide for continued maintenance.

(B) If an applicable implementation plan submitted before November 24, 1993, demonstrates that emissions from all sources

will be less than the total emissions that would be consistent with attainment and quantifies that “safety margin,” the state may submit an implementation plan revision which assigns some or all of this safety margin to highway and transit motor vehicles for the purposes of conformity. Such an implementation plan revision, once it is endorsed by the governor and has been subject to a public hearing, may be used for the purposes of transportation conformity before it is approved by EPA.

(C) A conformity demonstration shall not trade emissions among budgets which the applicable implementation plan (or implementation plan submission) allocates for different pollutants or precursors, or among budgets allocated to motor vehicles and other sources, unless the implementation plan establishes appropriate mechanisms for such trades.

(D) If the applicable implementation plan (or implementation plan submission) estimates future emissions by geographic subarea of the nonattainment area, the MPO and DOT are not required to consider this to establish subarea budgets, unless the applicable implementation plan (or implementation plan submission) explicitly indicates an intent to create such subarea budgets for the purposes of conformity.

(E) If a nonattainment area includes more than one MPO, the implementation plan may establish motor vehicle emissions budgets for each MPO, or else the MPOs must collectively make a conformity determination for the entire nonattainment area.

(24) Enforceability of Design Concept and Scope and Project-Level Mitigation and Control Measures.

(A) Prior to determining that a transportation project is in conformity, the MPO, other recipient of funds designated under Title 23 U.S.C. or the Federal Transit Laws, FHWA, or FTA must obtain from the project sponsor and/or operator written commitments to implement in the construction of the project and operation of the resulting facility or service any project-level mitigation or control measures which are identified as conditions for NEPA process completion with respect to local CO impacts. Before a conformity determination is made, written commitments must also be obtained for project-level mitigation or control measures which are conditions for making conformity determinations for a transportation plan or TIP and are included in the project design concept and scope which is used in the regional emissions analysis required by sections (17) Motor Vehicle Emissions Budget and (18) Emission Reduc-

tions in Areas Without Motor Vehicle Emissions Budgets or used in the project-level hot-spot analysis required by section (16).

(B) Project sponsors voluntarily committing to mitigation measures to facilitate positive conformity determinations must comply with the obligations of such commitments.

(C) Written commitments to mitigation measures must be obtained prior to a conformity determination, and project sponsors must comply with such commitments.

(D) If the MPO or project sponsor believes the mitigation or control measure is no longer necessary for conformity, the project sponsor or operator may be relieved of its obligation to implement the mitigation or control measure if it can demonstrate that the applicable hot-spot requirements of section (16), emission budget requirements of section (17) and emissions reduction requirements of section (18) are satisfied without the mitigation or control measure, and so notifies the agencies involved in the interagency consultation process required under section (5). The MPO and DOT must find that the transportation plan and TIP still satisfy applicable requirements of sections (17) and/or (18) and that the project still satisfies the requirements of section (16) and therefore that the conformity determinations for the transportation plan, TIP, and project are still valid. This finding is subject to the applicable public consultation requirements in subsection (5)(F) for conformity determination for projects.

(25) Exempt Projects. Notwithstanding the other requirements of this rule, highway and transit projects of the types listed in Table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 2 of this section is not exempt if the MPO in consultation with other agencies (see subparagraph (5)(C)1.C.), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. The state and the MPO must ensure that exempt projects do not interfere with TCM implementation. Table 2 follows:

**Table 2—Exempt Projects**

**Safety**

- Railroad/highway crossing
- Hazard elimination program
- Safer nonfederal-aid system roads
- Shoulder improvements
- Increasing sight distance

- Safety improvement program
- Traffic control devices and operating assistance other than signalization projects
- Railroad/highway crossing warning devices
- Guardrails, median barriers, crash cushions
- Pavement resurfacing or rehabilitation
- Pavement marking demonstration
- Emergency relief (23 U.S.C. 125)
- Fencing
- Skid treatments
- Safety roadside rest areas
- Adding medians
- Truck climbing lanes outside the urbanized area
- Lighting improvements
- Widening narrow pavements or reconstructing bridges (no additional travel lanes)
- Emergency truck pullovers

**Mass Transit**

- Operating assistance to transit agencies
- Purchase of support vehicles
- Rehabilitation of transit vehicles<sup>1</sup>
- Purchase of office, shop, and operating equipment for existing facilities
- Purchase of operating equipment for vehicles (e.g., radios, fare boxes, lifts, etc.)
- Construction or renovation of power, signal, and communications systems
- Construction of small passenger shelters and information kiosks
- Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures)
- Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way
- Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet<sup>1</sup>
- Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771

**Air Quality**

- Continuation of ride-sharing and van-pooling promotion activities at current levels
- Bicycle and pedestrian facilities

**Other**

- Specific activities which do not involve or lead directly to construction, such as—
  - Planning and technical studies
  - Grants for training and research programs
  - Planning activities conducted pursuant to Titles 23 and 49 U.S.C.
  - Federal-aid systems revisions
  - Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action
- Noise attenuation

Emergency or hardship advance land acquisitions (23 CFR part 712.204(d))  
Acquisition of scenic easements  
Plantings, landscaping, etc.  
Sign removal  
Directional and informational signs  
Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)  
Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational, or capacity changes

<sup>1</sup>Note—In PM<sub>10</sub> nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan.

(26) Projects Exempt From Regional Emissions Analyses. Notwithstanding the other requirements of this rule, highway and transit projects of the types listed in Table 3 of this section are exempt from regional emissions analysis requirements. The local effects of these projects with respect to CO concentrations must be considered to determine if a hot-spot analysis is required prior to making a project-level conformity determination. These projects may then proceed to the project development process even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 3 of this section is not exempt from regional emissions analysis if the MPO in consultation with other agencies (see subparagraph (5)(C)1.C.), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potential regional impacts for any reason. Table 3 follows:

**Table 3—Projects Exempt from Regional Emissions Analyses**

Intersection channelization projects  
Intersection signalization projects at individual intersections  
Interchange reconfiguration projects  
Changes in vertical and horizontal alignment  
Truck size and weight inspection stations  
Bus terminals and transfer points

(27) Traffic Signal Synchronization Projects. Traffic signal synchronization projects may be approved, funded, and implemented without satisfying the requirements of this section. However, all subsequent regional emissions analyses required by sections (17) and (18) for transportation plans, TIPs, or projects not from a conforming plan and TIP

must include such regionally significant traffic signal synchronization projects.

*AUTHORITY: section 643.050, RSMo Supp. 1997.\* 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.*

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

**10 CSR 10-5.490 Municipal Solid Waste Landfills**

*PURPOSE: This rule requires municipal solid waste landfills to monitor their non-methane organic compound (NMOC) emissions. Landfills having NMOC emission rates above the regulatory cutoff shall design and install a gas collection and control system.*

(1) Applicability. This rule applies to all municipal solid waste landfills (MSWLF) located in the St. Louis ozone nonattainment area (Jefferson, Franklin, St. Charles, St. Louis Counties and St. Louis city) that have accepted waste any time since November 8, 1987, or have additional capacity available for future waste deposition.

(2) Definitions.

(A) Active collection system—A gas collection system that uses gas mover equipment.

(B) Closed landfill—A landfill in which refuse is no longer being placed, and in which no additional wastes will be placed without first filing a notification of modification.

(C) Closure—That point in time when a landfill becomes a closed landfill.

(D) Design capacity—The maximum amount of waste the landfill can accept, as specified in the construction permit issued by the county or state agency responsible for regulating the landfill.

(E) Enclosed combustor—An enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

(F) Flare—An open combustor without enclosure or shroud.

(G) Gas mover equipment—The equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

(H) Household waste—Any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and mul-

iple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

(I) Lateral expansion—A horizontal expansion of the waste boundaries of an existing MSWLF. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

(J) Municipal solid waste landfill (MSWLF)—An entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A MSWLF may also receive other types of Resource Conservation and Recovery Act (RCRA) Subtitle D wastes such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a MSWLF may be separated by access roads. A MSWLF may be publicly or privately owned. A MSWLF may be a new MSWLF, an existing MSWLF or a lateral expansion.

(K) NMOC—Nonmethane organic compounds.

(L) Passive collection system—A gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

(M) Sufficient density—Any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this rule.

(N) Sufficient extraction rate—A rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

(3) General Provisions.

(A) Each owner or operator of a municipal solid waste (MSW) landfill having a design capacity less than one (1.0) million megagrams (one and one-tenth (1.1) million tons) by mass or one (1.0) million cubic meters (one and three-tenths (1.3) million cubic yards) by volume shall submit within ninety (90) days of the rule effective date an initial design capacity report, as described in section (7), to the director. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this

rule, except as provided for in paragraphs (3)(A)1. and 2.

1. The owner or operator shall submit an amended design capacity report to the director when there is any increase in the design capacity of the landfill. An increase in design capacity may result from an increase in the area or depth of the landfill, a change in the operating procedures of the landfill, or any other means.

2. If an increase in the design capacity of the landfill results in a revised maximum design capacity equal to or greater than one (1.0) million megagrams or one (1.0) million cubic meters, the owner or operator shall comply with the provisions of subsection (3)(B).

(B) Each owner or operator of an MSW landfill having a design capacity equal to or greater than one (1.0) million megagrams or one (1.0) million cubic meters shall submit within ninety (90) days of the rule effective date an initial design capacity report and an NMOC emission rate report, as described in sections (4) and (7), to the director. The NMOC emission rate shall be recalculated annually except as provided for in subsection (7)(C).

1. If the calculated NMOC emission rate is less than twenty-five (25) megagrams (twenty-seven and one half (27.5) tons) per year, the owner or operator shall—

A. Submit an annual emission rate report to the director; and

B. Recalculate the NMOC emission rate annually until such time as the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams, or the landfill closes.

(I) If the NMOC emission rate, upon recalculation, is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (3)(B)2.

(II) If the landfill is permanently closed, a closure notification shall be submitted to the director.

2. If the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall—

A. Submit a collection and control system design plan prepared by a professional engineer to the director within one (1) year of the NMOC emission rate report. Permit modification approval from the Missouri Department of Natural Resources' Solid Waste Management Program shall be required prior to construction of any gas collection system.

(I) The collection and control system shall meet the design requirements of subparagraph (3)(B)2.B.

(II) The collection and control system design plan shall include any alternatives to the operation standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of sections (4) through (7) proposed by the owner or operator.

(III) The collection and control system design plan shall either conform with specifications for active collection systems or include a demonstration to the director's satisfaction of the sufficiency of the alternate system.

(IV) The director will review the collection and control system design plan and either approve it, disapprove it, or request that additional information be submitted;

B. Install a collection and control system within eighteen (18) months of the submission of the design plan required in this section that effectively, as described in section (5), captures the gas generated within the landfill.

(I) An active collection system shall—

(a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control;

(b) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of five (5) years or more, if active, or two (2) years or more, if closed or at final grade;

(c) Collect gas at a sufficient extraction rate; and

(d) Be designed to minimize off-site migration of subsurface gas.

(II) A passive collection system shall—

(a) Comply with the provisions of subparts (3)(B)2.B.(I)(a), (b), and (d); and

(b) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected;

(III) Each owner or operator of an MSW landfill gas collection and control system shall—

(a) Operate the collection system with negative pressure at each wellhead except under the following conditions:

I. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in subsection (7)(H);

II. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; and

III. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the director;

(b) Operate each interior wellhead in the collection system with a landfill gas temperature less than fifty-five degrees Celsius (55°C) and with either a nitrogen level less than twenty percent (20%) or an oxygen level less than five percent (5%). The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

I. The nitrogen level shall be determined using Method 3C of Appendix A, 40 CFR part 60, unless an alternative test method is established as allowed by part (3)(B)2.A.(II).

II. Unless an alternative test method is established as allowed by part (3)(B)2.A.(II), the oxygen shall be determined by an oxygen meter using Method 3A of Appendix A, 40 CFR part 60, except that—

a. The span shall be set so that the regulatory limit is between twenty and fifty percent (20 and 50%) of the span;

b. A data recorder is not required;

c. Only two (2) calibration gases are required, a zero and span, and ambient air may be used as the span;

d. A calibration error check is not required; and

e. The allowable sample bias, zero drift, and calibration drift are plus or minus ten percent ( $\pm 10\%$ );

(c) Operate the collection system so that the methane concentration is less than five hundred (500) parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at thirty (30) meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan



shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the thirty (30)-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing;

(d) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with subparagraph (3)(B)2.C. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one (1) hour;

(e) Operate the control or treatment system at all times when the collected gas is routed to the system; and

(f) If monitoring demonstrates that the operational requirement in subpart (3)(B)2.B.(III)(a), (b), or (c) are not met, corrective action shall be taken as specified in subsection (5)(B). If corrective actions are taken as specified in subsection (5)(B), the monitored exceedance is not a violation of the operational requirements in this section;

C. Route all the collected gas to a control system described in part (3)(B)2.C.(I), (II), or (III) of this section.

(I) An open flare;

(II) A control system designed and operated to reduce NMOC by ninety-eight (98) weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by ninety-eight (98) weight-percent, or reduce the outlet NMOC concentration to less than twenty (20) parts per million by volume, dry basis as hexane at three percent (3%) oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test; or

(III) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use; and

D. The collection and control system may be capped or removed provided the following conditions are met:

(I) The landfill shall be no longer accepting solid waste and be permanently closed. A closure report shall be submitted to the director;

(II) The collection and control system has been in operation a minimum of fifteen (15) years; and

(III) The calculated NMOC gas produced by the landfill is less than twenty-five (25) megagrams per year on three (3) successive test dates. The test dates shall be no less than ninety (90) days apart and no more than one hundred eighty (180) days apart.

(4) Test Methods.

(A) The owner or operator of a MSW landfill shall calculate the NMOC emission rate using either the equation provided in paragraph (4)(A)1. or the equation provided in paragraph (4)(A)2. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for  $L_o$ , and 4,000 parts per million by volume as hexane for the  $C_{NMOC}$  unless site-specific values are calculated as described under Tier 1, Tier 2, and Tier 3 of this section.

1. The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for  $M_i$  if documentation is provided. The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \frac{n}{\sum_{i=1}^n k L_o M_i (e^{-kt_i}) (C_{NMOC})} (3.6 \times 10^{-9})$$

where,

$M_{NMOC}$  = Total NMOC emission rate from the landfill, megagrams per year

k = methane generation rate constant, year<sup>-1</sup>

$L_o$  = methane generation potential, cubic meters per megagram solid waste

$M_i$  = mass of solid waste in the  $i^{th}$  section, megagrams

$t_i$  = age of the  $i^{th}$  section, years  
 $C_{NMOC}$  = concentration of NMOC, parts per million by volume as hexane

$3.6 \times 10^{-9}$  = conversion factor

2. The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R if documentation is provided. The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

$M_{NMOC}$  = mass emission rate of NMOC, megagrams per year

$L_o$  = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year<sup>-1</sup>

c = time since closure, years (for active landfill c = 0 and  $e^{-kc} = 1$ )

t = age of landfill, years

$C_{NMOC}$  = concentration of NMOC, parts per million by volume as hexane

$3.6 \times 10^{-9}$  = conversion factor

(B) Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of twenty-five (25) megagrams per year.

1. If the NMOC emission rate calculated in paragraph (4)(A)1. or 2. is less than twenty-five (25) megagrams per year, then the landfill owner shall submit an emission rate report and shall recalculate the NMOC mass emission rate annually as required under paragraph (3)(B)1.

2. If the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams per year, then the landfill owner shall either comply with paragraph (3)(B)2., or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in subsection (4)(C).

(C) Tier 2. The owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two (2) sample probes per hectare of landfill surface that has retained solid waste for at least two (2) years. If the landfill is larger than twenty-five (25) hectares in area, only fifty (50) samples are required. The sample probes shall be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one (1) sample of landfill gas from each probe to determine the NMOC concentration using Method 25C or Method 18 of Appendix A, 40 CFR part 60. If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six (6) to convert from

$C_{\text{NMOC}}$  as carbon to  $C_{\text{NMOC}}$  as hexane. The owner or operator shall recalculate the NMOC mass emission rate using the equations provided in paragraph (4)(A)1. or 2. and using the average NMOC concentration from the collected samples instead of the default value in the equation.

1. If the resulting NMOC mass emission rate is less than twenty-five (25) megagrams per year, the owner or operator shall submit an emission rate report as required under paragraph (3)(B)1. and retest the site-specific NMOC concentration every five (5) years using the methods specified in this section.

2. If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than twenty-five (25) megagrams per year, then the landfill owner or operator shall either comply with paragraph (3)(B)2., or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in subsection (4)(D).

(D) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of Appendix A, 40 CFR part 60. The landfill owner or operator shall estimate the NMOC mass emission rate using the equations in paragraph (4)(A)1. or 2. using a site-specific methane generation rate constant  $k$ , and using the site-specific NMOC concentration as determined in subsection (4)(C) instead of the default values provided in subsection (4)(A). The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of twenty-five (25) megagrams per year.

1. If the NMOC mass emission rate is less than twenty-five (25) megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in paragraph (3)(B)1. and shall recalculate the NMOC mass emission rate annually. The calculation of the methane generation rate constant is performed only once, and the value obtained shall be used in all subsequent annual NMOC emission rate calculations.

2. If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall comply with paragraph (3)(B)2.

(E) The owner or operator may use other methods to determine the NMOC concentration or a site-specific  $k$  as an alternative to the methods in subsection (4)(C) and (D) if the method has been approved in writing by the director.

(F) After the installation of a collection and control system in compliance with section (5), the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in subparagraph (3)(B)2.D., using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

$M_{\text{NMOC}}$  = mass emission rate of NMOC, megagrams per year

$Q_{\text{LFG}}$  = flow rate of landfill gas, cubic meters per minute

$C_{\text{NMOC}}$  = NMOC concentration, parts per million by volume as hexane

1. The flow rate of landfill gas,  $Q_{\text{LFG}}$ , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A, 40 CFR part 60.

2. The average NMOC concentration,  $C_{\text{NMOC}}$ , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of Appendix A, 40 CFR part 60. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent *Compilation of Air Pollutant Emission Factors (AP-42)*. The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six (6) to convert from  $C_{\text{NMOC}}$  as carbon to  $C_{\text{NMOC}}$  as hexane.

3. The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the director.

(G) The owner or operator of each MSW landfill shall estimate the NMOC emission rate for comparison to the Prevention of Significant Deterioration (PSD) major source and significance levels in section 51.166 or 52.21 of 40 CFR parts 51 and 52 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions in paragraph (3)(B)2. is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in subsection (4)(F).

(H) For the performance test required in part (3)(B)2.C.(II), Method 25 or Method 18 shall be used to determine compliance with

ninety-eight (98) weight-percent efficiency or the twenty parts per million by volume (20 ppmv) outlet concentration level, unless another method to demonstrate compliance has been approved by the director as provided by part (3)(B)2.A.(II). If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent *Compilation of Air Pollutant Emission Factors (AP-42)*. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

$\text{NMOC}_{\text{in}}$  = mass of NMOC entering control device

$\text{NMOC}_{\text{out}}$  = mass of NMOC exiting control device

(5) Compliance.

(A) Except as provided for in part (3)(B)2.A.(II), the following methods shall be used to determine whether the gas collection system is in compliance.

1. One of the following equations shall be used in calculating the maximum expected gas generation flow rate from the landfill as described in subpart (3)(B)2.B.(I)(a). The  $k$  and  $L_0$  kinetic factors shall be those published in the most recent *Compilation of Air Pollution Emission Factors (AP-42)* or other site-specific values demonstrated to be appropriate and approved in writing by the director. A value of no more than fifteen (15) years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure. After installation of a collection and control system, actual flow data shall be used to project the maximum flow rate.

A. For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_0 R (e^{-k_c} - e^{-kt})$$

where,

$Q_m$  = maximum expected gas generation flow rate, cubic meters per year

$L_0$  = methane generation potential, cubic meters per megagram solid waste

$R$  = average annual acceptance rate, megagrams per year

$k$  = methane generation rate constant, year<sup>-1</sup>



- c = time since closure, years (for an active landfill  $c = 0$  and  $e^{-kc} = 1$ )
- t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

B. For sites with known year-to-year solid waste acceptance rate:

$$Q_m = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i})$$

where,

- $Q_m$  = maximum expected gas generation flow rate, cubic meters per year
- k = methane generation rate constant, year<sup>-1</sup>
- $L_o$  = methane generation potential, cubic meters per megagram solid waste
- $M_i$  = mass of solid waste in the  $i^{\text{th}}$  section, megagrams
- $t_i$  = age of the  $i^{\text{th}}$  section, years.

2. For the purposes of determining sufficient density of gas collectors for compliance with subpart (3)(B)2.B.(I)(b), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the director, capable of controlling and extracting gas from all portions of the landfill.

3. For the purposes of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with subpart (3)(B)2.B.(I)(c), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days. If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within one hundred twenty (120) days of the initial measurement of positive pressure. Compliance with this subsection will not be required during the first one hundred eighty (180) days after gas collection system start-up.

4. An owner or operator seeking to demonstrate compliance with subpart (3)(B)2.B.(I)(d) shall provide information satisfactory to the director demonstrating that off-site migration is being controlled.

(B) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and in a serpentine pattern every thirty (30) meters for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specification provided in Method 21 of Appendix A, 40 CFR part 60, except that "methane" shall replace all references to VOC.

1. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least thirty (30) meters from the perimeter wells.

2. Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A, 40 CFR part 60, except that the probe inlet shall be placed within five to ten centimeters (5–10 cm) of the ground.

3. Any reading of five hundred parts per million (500 ppm) or more above background at any location shall be recorded as an exceedance.

A. The location of each exceedance shall be marked, and the location recorded.

B. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made within ten (10) calendar days of detecting the exceedance.

C. Any location at which an exceedance has occurred shall be rechecked within ten (10) calendar days of detecting the exceedance. The location shall be rechecked every ten (10) calendar days until either a reading below five hundred parts per million (500 ppm) is taken or there are three (3) exceedances.

D. Any location that initially exceeded five hundred parts per million (500 ppm) methane, but does not exceed five hundred parts per million (500 ppm) methane at the ten (10)-day recheck, shall be remonitored one (1) month from the initial exceedance. If the monthly remonitoring does not exceed five hundred parts per million (500 ppm) methane, then quarterly monitoring can be resumed.

E. When any location exceeds five hundred parts per million (500 ppm) methane three (3) times within a quarterly period, a new well or other collection device shall be

installed within one hundred twenty (120) calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding time line for installation may be submitted to the director for written approval.

(6) Monitoring.

(A) Each owner or operator seeking to comply with part (3)(B)2.B.(I) for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and—

1. Measure the gauge pressure in the gas collection header on a monthly basis;

2. Monitor the nitrogen or oxygen concentration in the landfill gas on a monthly basis; and

3. Monitor the temperature of the landfill gas on a monthly basis.

(B) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. using an enclosed combustion device shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

1. A temperature monitoring device equipped with a continuous recorder and having an accuracy of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5^\circ \text{C}$ , whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than forty-four (44) megawatts; and

2. A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The owner or operator shall either—

A. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or

B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

(C) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

1. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and

2. A device that records flow to or bypass of the flare. The owner or operator shall either—

A. Install, calibrate, and maintain a gas flow rate measuring device that shall



record the flow to the control device at least every fifteen (15) minutes; or

B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

(D) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. using a device other than an open flare or an enclosed combustion device shall provide information satisfactory to the director describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The director shall review the information and either approve it, or request that additional information be submitted.

(E) Each owner or operator seeking to comply with subsection (5)(B) shall monitor surface concentrations of methane according to the instrument specifications. Any closed landfill that has no exceedances of the five hundred parts per million (500 ppm) standard in three (3) consecutive quarterly monitoring periods may change to annual monitoring. Any exceedance of the five hundred parts per million (500 ppm) standard recorded during the annual monitoring shall return the monitoring frequency to quarterly testing.

(7) Reporting and Recordkeeping.

(A) The initial design capacity report shall be submitted ninety (90) days from the rule effective date and contain the following information:

1. A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provision of the state, local, tribal, or RCRA construction or operating permit; and

2. The maximum design capacity of the landfill. Where the maximum design capacity is specified in the state or local construction or RCRA permit, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with such parameters as depth of solid waste, solid waste acceptance rate, and compaction practices as part of the report. The director may request other information as may be necessary to verify the maximum design capacity of the landfill.

(B) An amended design capacity report shall be submitted to the director providing notification of any increase in the design capacity of the landfill. The amended design capacity report shall be submitted within

ninety (90) days of the issuance of an amended construction or operating permit.

(C) The initial NMOC emission rate report shall be submitted within ninety (90) days of the rule effective date and annually thereafter. The initial NMOC emission rate report may be combined with the initial design capacity report required in subsection (7)(A). The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual emission rate. An annual emission rate report will not be required for landfills after installation of a collection and control system.

(D) Each owner or operator subject to subparagraph (3)(B)2.A. shall submit a collection and control system design plan to the director within one (1) year of the NMOC emission rate report, required under subsection (7)(C), in which the emission rate exceeds twenty-five (25) megagrams per year, except as follows:

1. If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided under subsection (4)(C) and the resulting rate is less than twenty-five (25) megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than twenty-five (25) megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within one hundred eighty (180) days of the first calculated exceedance of twenty-five (25) megagrams per year; and

2. If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in subsection (4)(D) and the resulting NMOC emission rate is less than twenty-five (25) megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report, with the site-specific methane generation rate constant (k) shall be submitted to the director within one (1) year of the first calculated emission rate exceeding twenty-five (25) megagrams per year.

(E) Each owner or operator of a controlled landfill shall submit a closure report to the director within thirty (30) days of the date the landfill ceases accepting solid waste. The director may request additional information

as may be necessary to verify that permanent closure has taken place.

(F) Each owner or operator of a controlled landfill shall submit an equipment removal report to the director thirty (30) days prior to removal or cessation of operation of the control equipment. The report shall contain all of the following items:

1. A copy of the closure report;
2. A copy of the initial performance test report demonstrating that the fifteen (15)-year minimum control period has expired; and
3. Dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing twenty-five (25) megagrams or greater of NMOC per year.

(G) Each owner or operator of an MSW landfill subject to paragraph (3)(B)2. shall keep up-to-date, readily accessible on-site records of the following:

1. Maximum design capacity;
2. Control equipment compliance monitoring;
3. A plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector; and
4. Collection and control system exceedances of the operation standards and the location of each exceedance.

(H) Each owner or operator of a landfill seeking to comply with paragraph (3)(B)2. using an active collection system designed in accordance with subparagraph (3)(B)2.B. shall submit to the director annual reports of the recorded information in paragraphs (7)(H)1.–6. The initial annual report shall be submitted within one hundred and eighty (180) days of installation and start-up of the collection and control system, and shall include an initial performance test report.

1. Value and length of time for exceedance of applicable parameters monitored under subsections (6)(A), (B), (C), and (D).

2. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow.

3. Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.

4. All periods when the collection system was not operating in excess of five (5) days.

5. The location of each exceedance of the five hundred parts per million (500 ppm) methane concentration as provided in subpart (3)(B)2.B.(III)(c) and the concentration

recorded at each location for which an exceedance was recorded in the previous month.

6. The date of installation and the location of each well or collection system expansion added.

(I) Each owner or operator seeking to comply with subparagraph (3)(B)2.A. shall include the following information with the initial performance test report:

1. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

2. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

3. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

4. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;

5. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

6. The provisions for the control of off-site migration.

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