K.A.R. 28-19-73 SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS AND METAL FURNITURE

(a) The provisions of this regulation shall be applicable to each miscellaneous metal parts and products and metal furniture coating application system at those facilities which have a VOC potential contaminant emission rate equal to or greater than three tons per year on a facility-wide basis. The VOC potential contaminant emission rate of a facility shall be determined by:

(1) the maximum hourly production rate of each coating application system; and

(2) the assumption that the facility operates 24 hours per day, 365 days per year provided that the facility's operating hours are not otherwise limited by federally enforceable permit conditions.

(b) This regulation shall not be applicable to the following manufacturing categories which have miscellaneous metal parts and products coating operations:

(1) automobiles and light duty trucks;

(2) metal cans;

(3) customized top coating of automobiles and trucks, if less than 35 vehicles per day are processed; and

(4) automobile refinishing.

Each facility subject to this regulation shall remain subject so long as this regulation remains in effect or until the facility's VOC potential contaminant emission rate is demonstrated, to the satisfaction of the department, to be always less than three tons per year.

(c) An owner or operator of any facility subject to this regulation shall not conduct any surface coating operation that emits VOC to the atmosphere in excess of that which would be emitted by using the following coatings with the VOC content specified; (1) through (5) applicable to miscellaneous metal parts and products, (6) applicable to metal furniture:

(1) 4.3 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system that applies clear coatings;

(2) 3.5 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system that is air-dried or forced warm air-dried at temperatures up to 194°F;

(3) 3.5 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system that applies extreme performance coatings except that coatings applied to the interior of metal pails and metal drums may contain 4.3 pounds per gallon of coating, less water and exempt VOC. As used in this regulation pails shall mean any nominal cylindrical metal container of 1-12 gallon capacity, and drums shall mean any cylindrical metal container of 13 to 110 gallons capacity;

(4) 0.4 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system that applies powder coatings;

(5) 3.0 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system for any other coating; and

(6) 3.0 pounds per gallon of coating, less water and exempt VOC, delivered to a coating application system for prime, top-coat or single coat operations.

(d) If more than one emission limitation in subsection (c) applies to a specific coating, than the least stringent emission limitation shall apply.

(e) Use of additional VOC shall be considered as follows:

(1) for determining the potential contaminant emission rate of the facility in accordance with subsection (a), include that added for thinning coatings and that used for purging or washing coating applicators which can not be otherwise accounted for in a reclamation system; and

(2) for compliance with subsection (c), include that added for thinning coatings.

(f) The emission limits which will result from the use of coatings in subsection (c) shall be achieved by:

(1) application of coatings which meet or exceed the requirements of subsection (c) per coating application system on a daily weighted average basis; or

(2) application of coatings with improved transfer efficiency demonstrated, through testing, by methods approved by the department, to achieve equivalent emissions based on the weight of VOC emitted per gallon of solids applied as would be emitted with the coatings specified in subsection (c) per coating application system on a daily weighted average basis; or

(3) application, for the capture and reduction of VOC emissions through either destruction or collection, of a VOC vapor processing system demonstrated through testing as capable of maintaining an overall VOC emission reduction of at least 90 percent. Use of a VOC vapor processing system shall require that continuous monitors be installed, calibrated, operated, and maintained. The continuous monitors shall continuously measure and records the following parameters:

(A) with an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius, or 2.5 degrees Celsius, the exhaust gas temperature of all VOC destruction devices and the gas temperature immediately upstream and downstream of any catalyst bed;

(B) with an accuracy of ± 2.00 percent of the amount being monitored, the cumulative amount of VOC recovered during a calendar month for all VOC recovery equipment;

(C) any other parameters considered by the department necessary to achieve compliance with this regulation; or

(4) any combination of methods approved by the department which results in emissions, when calculated as pounds of VOC per gallon of solids applied per coating operation, that are no greater on a daily weighted average basis than those achieved with the appropriate coatings specified in subsection (c).

(5) For the purpose of this subsection the term “daily weighted average” is the total weight of VOC emitted from a coating application system per day divided by the volume of coating used or volume solids applied per day, depending on the units of the emission limitation.

(g) Prior to 180 days after a facility becomes subject to the provisions of this regulation, the owner or operator of the facility shall demonstrate, at the expense of the owner or operator, initial compliance with this regulation by testing. An owner or operator shall notify the department, in writing, of the intent to test not later than 30 days prior to the scheduled date of testing. The owner or operator shall submit to the department any information about the test requested by the department. If necessary to determine compliance with this regulation, the owner or operator of any facility subject to this regulation may be required to demonstrate compliance with this regulation by testing at the expense of the owner or operator. Testing, for purposes of this regulation, shall be approved by the department and consistent with:

(1) the test procedures found at 40 CFR Part 60, appendix A, as in effect July 1, 1989; and

(2) procedures as established by the department in approving proposed test plans consistent with subsection (g)(1).

(h) Demonstration of continual compliance per coating application system achieved by sections (f)(2) through (f)(4) shall be based on the finding that the results obtained by the formula in (2) are equal to or less than the results obtained by the formula in (1), both results on a daily weighted basis.

(1) complying coating equivalent emissions expressed as:

$$\frac{\text{VOC, lbs}}{\text{gal of solids applied}} = \frac{(EL)}{(TE)\ (VS)}$$

EL = the coating characteristic established by this regulation, expressed as pounds of VOC per gallon of coating, less water and exempt VOC

TE = baseline transfer efficiency as defined at K.A.R. 28-19-61, expressed as a decimal

VS = volume fraction of solids in EL, expressed as a decimal, where the density of coating solvents is assumed to be 7.36 pounds per gallon.

(2) actual coating equivalent emissions expressed as:

$$\frac{\text{VOC, lbs}}{\text{gal of solids applied}} = \frac{(AC)\ (1-E)}{(vs)\ (te)}$$

AC = pounds of VOC per gallon of the coating as delivered to the coating application system, less exempt VOC and water;

E = the demonstrated actual efficiency of installed vapor processing system determined by the actual vapor collection system efficiency multiplied by the actual VOC emissions control device efficiency, expressed as a decimal;

vs = volume fraction of solids of the coating as delivered to the coating application system, expressed as a decimal. For water-borne coatings the volume fraction of solids is determined without water;

te = the actual demonstrated transfer efficiency of the coating application system, expressed as a decimal.

(A) The owner or operator shall determine AC and vs by (1) using Reference Method 24 data supplied by the coating manufacturer, adjusted by the VOC used for thinning purposes, or (2) from an applied coating analysis conducted by the owner or operator in accordance with Reference Method 24. If manufacturers formulation data is used, verification of the data may be required by Reference Method 24, or a department approved equivalent method, and at the expense of the owner or operator.

(i) The owner or operator of each emission unit within a facility subject to this regulation shall keep and maintain records at the facility and make available for inspection by a department representative to determine continuous compliance of the facility with this regulation. The records shall include the following information and shall be kept at the facility for two years following the date of record:

(1) the type and amount of coatings delivered daily to each coating application system. The daily recordkeeping requirements of this subsection may be waived if the owner or operator:

(A) demonstrates that it uses only coatings that have been determined to be in compliance with subsection (c) of this regulation, and

(B) has received written approval from the department for a waiver from this requirement;

(2) the manufacturer's coating formulation data, and other test data, including density, weight percent volatiles (as determined using a one hour bake), weight percent water, and weight percent exempt VOC, determined by Reference Method 24 for each coating;

(3) the coating's solids content, as delivered to the coating application system, in volume percent;

(4) the results of any testing conducted at the facility pertaining to transfer efficiencies, capture efficiencies or control equipment reduction efficiencies;

(5) the type, density and amount of solvents used daily for coating thinning, purge and equipment cleaning;

(6) amount, components and density of waste solvents reclaimed daily;

(7) those records as required in subsections (f)(3)(A) through (f)(3)(C); and

(8) maintenance records of the temperature monitoring equipment.

(j) The owner or operator of a facility shall comply with all emission limits within 180 days after the facility becomes subject to the provisions of this regulation.

(k) The provisions of this regulation shall be applicable only to affected facilities located in areas which have been identified as not meeting the national primary ambient air quality standard for ozone in the manner prescribed by the provisions of Section 107(d) of the federal clean air act, 42 U.S.C. 7407 as promulgated at 40 CFR Part 81 as in effect July 1, 1989.

EPA Rulemakings

CFR: 40 C.F.R. 52.870(c)(27)(i)(A)
FRM: 58 FR 3847 (1/12/93)
PRM: None
State Submission: 9/15/92
State Effective Date: 6/8/92
APDB File: KS-34
Description: This revision adopted the reasonably available control technology limit by allowing a volatile organic compound content of 4.3 pounds per gallon for coatings applied to the interior of metal pails and drums.

CFR: 40 C.F.R. 52.870(c)(20)(i)(A)
FRM: 58 FR 17700 (5/18/88)
PRM: 52 FR 36963 (10/2/87)
State Submission: 1/6/88
State Effective Date: 5/1/88
APDB File: KS-21
Description: This regulation was adopted to include solids applied rather than total amount of paint used to aid in calculating compliance when using methods other than compliance coatings. Transfer efficiency and recordkeeping requirements are also addressed.

Difference Between the State and EPA-Approved Regulation

None.