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Prepped by Ryan Dugan

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD-FRL-2070-7]

Standards of Performance for New Stationary Sources; Metal Coil Surface Coating Operations

April 26, 1982.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Standards of performance for metal coil surface coating operations were proposed in the **Federal Register** on January 5, 1981 (45 FR 1102). This action promulgates standards of performance for metal coil surface coating operations. These standards implement Section 111 of the Clean Air Act and are based on the Administrator's determination that metal coil surface coating operations cause or contribute significantly to all pollution that may reasonably be anticipated to endanger public health or welfare. The intended effect of these standards is to require all new, modified, and reconstructed metal coil surface coating operations to use the best demonstrated system of continuous emission reduction, considering costs, nonair quality health, and environmental and energy impacts.

EFFECTIVE DATE: November 1, 1982.

Under Section 307(b)(1) of the Clean Air Act, judicial review of this new source performance standard (NSPS) is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under Section 307(b)(2) of the Clean Air Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

ADDRESSES: *Background Information Document.* The background information document (BID) for the promulgated standards may be obtained from the U.S. EPA Library (MD-35), Research Triangle Park, North Carolina 27711, telephone number (919) 541-2777. Please refer to "Metal Coil Surface Coating Industry: Background Information for Promulgated Standards," EPA-450/3-80-035b. The BID contains (1) a summary of all the public comments made on the proposed standards and the Administrator's response to the comments, (2) a summary of the changes made to the standards since proposal, and (3) the final environmental impact statement (EIS), which summarizes the impacts of the standards.

Docket. A docket, number A-80-6, containing information considered by EPA in development of the promulgated standards is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section (A-130), West Tower Lobby, Gallery 1, 401 M Street, SW., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. Fred Porter, Section Chief, Standards Development Branch, Emission Standards and Engineering Division (MD-13), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone (919) 541-5578.

SUPPLEMENTARY INFORMATION: OMB Control Number: 2000-0660.

The Standards

Standards of performance for new sources established under Section 111 of the Clean Air Act reflect:

> • • • Application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impact, and energy requirements) the Administrator determines has been adequately demonstrated (Section 111(a)(1)).

The standards apply to all new, modified, and reconstructed metal coil surface coating (coil coating) operations. Existing facilities are not subject to the standards unless they undergo a modification or a reconstruction as defined in 40 CFR 60.14 and 60.15. Compliance with the standards can be achieved by any of four approaches for each affected facility. The owner or operator can use coatings whose average volatile organic compound (VOC) content on a monthly basis is 0.28 kilograms per liter (kg/*l*) of coating solids applied or less; the owner or operator can apply higher VOC-content coatings if he reduces VOC emissions to 0.14 kg/*l* of coating solids applied or less; the owner or operator can comply by demonstrating an overall VOC emission reduction of 90 percent or greater prior to discharge to the atmosphere; or the owner or operator can comply by the combined use of low VOC-content coatings and higher VOC-content coatings with a control device to achieve a calculated monthly emission limit. The owner or operator using an incinerator to control VOC emissions is required to construct an enclosure of the coating application station during the test of incinerator efficiency to evaluate the capture efficiency of the control system.

The standards require each owner or operator to conduct monthly performance tests to demonstrate compliance with the proposed emission limits. Where coatings are used without a VOC capture system and emission control device to meet the numerical limit of 0.28 kg/*l* of coating solids applied, the owner or operator is required to calculate and record a weighted average of the VOC content of coatings applied (including dilution solvents) for each affected facility for each calendar month. Manufacturers' formulation data will normally be used for that purpose; Reference Method 24 will be used to resolve any disputes that may occur.

Where higher VOC-content coatings are used with a VOC capture system and emission control device to meet the numerical limit of 0.14 kg/*l* of coating solids applied, the owner or operator is required to calculate and record the weighted average of the VOC content (including dilution solvents) of coatings applied for each affected facility for each calendar month. During the initial performance tests, the owner or operator must measure the overall VOC emission reduction achieved by the VOC capture system and emission control device. Reference Method 25 and the equations provided in the standards are used for these determinations. Compliance is demonstrated where the overall VOC emission reduction is equal to or less than 0.14 kg/*l*.

Where compliance is achieved through the demonstration of a 90-percent overall reduction in VOC emissions, the owner or operator will conduct an initial performance test by using Reference Method 25 and the equations provided in the standards. Compliance is demonstrated where the overall percent reduction is equal to or greater than 90 percent. After the first monthly test, the owner or operator is required to monitor the operating parameters of the control device.

Where compliance is achieved by the combined use of low VOC-content coatings and higher VOC-content coatings with a control device, the owner or operator is required to calculate and record a weighted average VOC content of coatings applied (including dilution solvents) for each affected facility for each calendar month. Separate calculations must be made for coatings used without the control device in operation and for coatings used with the control device in operation. During the initial performance test, the owner or operator must measure the overall VOC emission reduction achieved by the capture

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Authority: Sections 111 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7411, 7601(a)), and additional authority as noted below.

Subpart TT—Standards of Performance for Metal Coil Surface Coating

§ 60.460 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to the following affected facilities in a metal coil surface coating operation: each prime coat operation, each finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

(b) This subpart applies to any facility identified in paragraph (a) of this section that commences construction, modification, or reconstruction after January 5, 1981.

§ 60.461 Definitions.

(a) All terms used in this subpart not defined below are given the same meaning as in the Act or in Subpart A of this part.

"Coating" means any organic material that is applied to the surface of metal coil.

"Coating application station" means that portion of the metal coil surface coating operation where the coating is applied to the surface of the metal coil. Included as part of the coating application station is the flashoff area between the coating application station and the curing oven.

"Curing oven" means the device that uses heat or radiation to dry or cure the coating applied to the metal coil.

"Finish coat operation" means the coating application station, curing oven, and quench station used to apply and dry or cure the final coating(s) on the surface of the metal coil. Where only a single coating is applied to the metal coil, that coating is considered a finish coat.

"Metal coil surface coating operation" means the application system used to apply an organic coating to the surface of any continuous metal strip with a thickness of 0.15 millimeter (mm) (0.006 in.) or more that is packaged in a roll or coil.

"Prime coat operation" means the coating application station, curing oven, and quench station used to apply and dry or cure the initial coating(s) on the surface of the metal coil.

"Quench station" means that portion of the metal coil surface coating operation where the coated metal coil is cooled, usually by a water spray, after baking or curing.

"VOC content" means the quantity, in kilograms per liter of coating solids, of volatile organic compounds (VOC's) in a coating.

(b) All symbols used in this subpart not defined below are given the same meaning as in the Act and in Subpart A of this part.

C_a = the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon).

C_b = the VOC concentration on each gas stream entering the control device (parts per million by volume, as carbon).

C_f = the VOC concentration in each gas steam emitted directly to the atmosphere (parts per million by volume, as carbon).

D_c = density of each coating, as received (kilograms per liter).

D_d = density of each VOC-solvent added to coatings (kilograms per liter).

D_r = density of VOC-solvent recovered by an emission control device (kilograms per liter).

E = VOC destruction efficiency of the control device (fraction).

F = the proportion of total VOC's emitted by an affected facility that enters the control device (fraction).

G = volume-weighted average mass of VOC's in coatings consumed in a calendar month per unit volume of coating solids applied (kilograms per liter).

L_c = the volume of each coating consumed, as received (liters).

L_d = the volume of each VOC-solvent added to coatings (liters).

L_r = the volume of VOC-solvent recovered by an emission control device (liters).

L_s = the volume of coating solids consumed (liters).

M_d = the mass of VOC-solvent added to coatings (kilograms).

M_o = the mass of VOC's in coatings consumed, as received (kilograms).

M_r = the mass of VOC's recovered by an emission control device (kilograms).

N = the volume-weighted average mass of VOC emissions to the atmosphere per unit volume of coating solids applied (kilograms per liter).

Q_a = the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour).

Q_b = the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour).

Q_f = the volumetric flow rate of each gas steam emitted directly to the atmosphere (dry standard cubic meters per hour).

R = the overall VOC emission reduction achieved for an affected facility (fraction).

S = the calculated monthly allowable emission limit (kilograms of VOC per liter of coating solids applied).

V_o = the proportion of solids in each coating, as received (fraction by volume).

W_o = the proportion of VOC's in each coating, as received (fraction by weight).

§ 60.462 Standards for volatile organic compounds.

(a) On and after the date on which § 60.8 requires a performance test to be completed, each owner or operator subject to this subpart shall not cause to be discharged into the atmosphere more than:

(1) 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device(s); or

(2) 0.14 kg VOC/l of coating solids applied for each calendar month for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(3) 10 percent of the VOC's applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(4) a value between 0.14 (or a 90-percent emission reduction) and 0.28 kg VOC/l of coating solids applied for each calendar month for each affected facility that intermittently uses an emission control device operated at the most recently demonstrated overall efficiency.

§ 60.463 Performance test and compliance provisions.

(a) Sections 60.8 (d) and (f) do not apply to the performance test.

(b) The owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8(a) and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.

(c) The owner or operator shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied.

(1) An owner or operator shall use the following procedures for each affected facility that does not use a capture system and control device to comply with the emission limit specified under § 60.462(a)(1). The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating, as received.