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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD-FRL-3211-3]

Standards of Performance for New Stationary Sources; Rubber Tire Manufacturing Industry

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Standards of performance for the rubber tire manufacturing industry were proposed in the Federal Register on January 20, 1983 (48 FR 2676). This action promulgates standards of performance for the rubber tire manufacturing industry. These standards implement section 111 of the Clean Air Act and are based on the Administrator's determination that the synthetic rubber industry causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The intended effect of these standards is to require new, modified, and reconstructed facilities at rubber tire manufacturing plants to reduce emissions to the level achievable by the best demonstrated system of continuous emission reduction, considering costs, nonair quality health, and environmental and energy impacts.

EFFECTIVE DATE: September 15, 1987.

Under section 307(b)(1) of the Clean Air Act, judicial review of this new source performance standard is available *only* by the filing of 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 the 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 "Rubber Tire Manufacturing Industry—Background for Promulgated Standards," EPA-450/3-81-008b. The promulgation BID contains: (1) A summary of all public comments made on the proposed standards and the Administrator's response to the comments, (2) summary of the changes made to the standards since proposal, and (3) the final environmental impact

statement which summarizes the impacts of the standards.

Docket. A docket, number A-80-9, containing information considered by the 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 the EPA's Central Docket Section, South Conference Center, Room 4, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For further information and official interpretations of applicability, compliance requirements, and reporting aspects of the promulgated standard, contact the appropriate Regional, State, or local office contact as listed in 40 CFR 60.4. For further information on the background of the regulatory decisions in the promulgated standard, contact Ms. Dianne Byrne, Standards Development Branch, Emission Standards and Engineering Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5266. For further information on the technical aspects of the promulgated standards, contact Mr. Dave Salman, Chemicals and Petroleum Branch, Emission Standards and Engineering Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5417.

SUPPLEMENTARY INFORMATION:

Summary of 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, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated [section 111(a)(1)].

For convenience, this will be referred to as "best demonstrated technology" or "BDT."

The standards limit volatile organic compounds (VOC) emissions from new, modified, and reconstructed facilities. VOC emissions from the rubber tire industry are caused by solvent application to different components of a tire during the manufacturing process. The affected facilities are each undertread cementing operation, each sidewall cementing operation, each tread end cementing operation, each bead cementing operation, each green tire spraying operation, each Michelin-A

operation, each Michelin-B operation, and each Michelin-C-automatic operation.

Facilities affected by these standards are those where components for agricultural, airplane, industrial, mobile home, light-duty truck or passenger vehicle tires which have a bead diameter up to and including 0.5 meter (m) [19.7 inches (in)] and cross section dimension up to and including 0.325 m (12.8 in) are mass produced in assembly-line fashion.

The standards for each undertread cementing operation, each sidewall cementing operation, each green tire spraying operation where organic solvent-based sprays are used, and each Michelin-B operation require at least 75 percent emission reduction. The standards require 65 percent emission reduction for each Michelin-A operation and each Michelin-C-automatic operation. The standards require that emissions be limited to 10 grams of VOC per tire (g/tire) for each tread end cementing operation, 5 grams of VOC per bead (g/bead) for each bead cementing operation, 1.2 g/tire for a water-based inside green tire spray application, and 9.3 g/tire for a water-based outside green tire spray application.

Total (uncontrolled) monthly VOC use cutoffs (kg/mo limits) have been provided for undertread cementing operations, sidewall cementing operations, green tire spraying operations where organic solvent-based sprays are used, Michelin-A operations, Michelin-B operations, and Michelin-C-automatic operations. Where monthly VOC use at one of these affected facilities is less than or equal to the applicable cutoff, that affected facility is exempt from the prescribed percent emission reduction requirements. The monthly VOC use cutoffs vary according to the number of days in a monthly compliance period. For each undertread cementing operation, the VOC use cutoffs at or below which 75 percent emission reduction is not required are as follows:

Number of days	VOC use limit
28.....	3,870 kilograms (kg)
29.....	4,010 kg
30.....	4,150 kg
31.....	4,280 kg
35.....	4,840 kg (for 5-week production months only).

The monthly VOC use cutoffs for each sidewall cementing operation and each green tire spraying operation where organic solvent-based sprays are used,

at or below which 75 percent emission reduction is not required, are as follows:

Number of days	VOC use limit
28	3,220 kg
29	3,340 kg
30	3,450 kg
31	3,570 kg
35	4,030 kg (for 5-week production months only).

The monthly VOC use cutoffs for each Michelin-B operation, at or below which 75 percent emission reduction is not required, are as follows:

Number of days	VOC use limit
28	1,310 kg
29	1,360 kg
30	1,400 kg
31	1,450 kg
35	1,640 kg (for 5-week production months only).

The monthly VOC use cutoffs for each Michelin-A operation and each Michelin-C-automatic operation, at or below which 65 percent emission reduction is not required, are as follows:

Number of days	VOC use limit
28	1,570 kg
29	1,630 kg
30	1,690 kg
31	1,740 kg
35	1,970 kg (for 5-week production months only).

The standards also provide an alternative means of compliance with the 75 percent emission reduction requirements. This option, available for undertread cementing operations, sidewall cementing operations, green tire spraying operations where organic solvent-based sprays are used, and Michelin-B operations, requires the owner or operator to demonstrate that the affected facility meets the following equipment and operating parameters:

- (1) Captured emissions vented to a 95 percent efficient control device;
- (2) An enclosure around the cement or spray application and drying areas;
- (3) For undertread cementing operations, sidewall cementing operations, and Michelin-B operations, enclosure of the drying area to contain components for a minimum of 30 seconds after cement application;
- (4) For green tire spraying operations where organic solvent-based sprays are used, enclosure of tires for a minimum of 30 seconds after spraying;
- (5) A minimum 100 feet per minute (fpm) face velocity through each permanent opening to the enclosure; and
- (6) The total area of all permanent openings into the enclosure shall not exceed the area necessary to maintain

the VOC concentration in the exhaust gas at 25 percent of the lower explosive limit (LEL) while the facility is operating at maximum solvent use rate, a 100 fpm face velocity is maintained through all permanent openings, and all temporary openings are closed.

Separate testing, monitoring, recordkeeping, and reporting requirements are included for each combination of standard format (g/tire, g/bead, kg/mo, or percent emission reduction), control technique (low solvent use or emission reduction system), and compliance method (performance tests or equipment specifications). Initial performance tests are required for each affected facility.

Monthly performance tests are required to determine compliance with each of the g/tire limits (tread end cementing and water-based green tire spraying); the g/bead limit; and each of the kg/mo VOC use limits (undertread cementing, sidewall cementing, organic solvent-based green tire spraying, Michelin-A, Michelin-B, and Michelin-C-automatic). Whether or not monthly performance tests are required to determine compliance with the percent emission reduction standards depends primarily on the type of control device used, and then on the method of demonstrating compliance.

The standards require continuous monitoring and recording of thermal incinerator combustion temperature and of the temperature before and after the catalyst bed for catalytic incinerators. If a carbon adsorber is used as a VOC recovery system, then the standards require the continuous monitoring and recording of the organics concentration level of the carbon bed exhaust. The standards require that the owner or operator maintain at the source for a period of at least 2 years records of all data and calculations used to determine VOC emissions for each affected facility.

The standards require the owner or operator to meet all notification and reporting requirements specified in Subpart A of 40 CFR Part 60. Each owner or operator of an affected facility must declare the monthly schedule (each calendar month or a 4-4-5-week schedule) to be used in making compliance determinations. In addition, each owner or operator of an affected undertread cementing, sidewall cementing, green tire spraying (using organic solvent-based sprays), Michelin-A, Michelin-B, or Michelin-C-automatic facility must declare which standard will be met (percent emission reduction or kg/mo VOC use) or whether compliance will be demonstrated by meeting the optional equipment

specifications (not applicable for Michelin-A or Michelin-C-automatic facilities). These declarations must be made in writing to the Administrator at the time of notification of anticipated startup as required in 40 CFR 60.7(b). Where monitoring of operating parameters is required, the owner or operator must report semiannually when monitored parameters are not within acceptable limits.

Method 24 of Appendix A to Part 60 or formulation data will be used to determine the VOC content of cements and green tire spray materials, and Method 25 will be used to determine the concentration of VOC in exhaust gas streams.

Summary of Environmental, Energy, and Economic Impacts

The incremental impacts in the background information document (BID) for the proposed standards, "Rubber Tire Manufacturing Industry—Background Information for Proposed Standards," EPA-450/3-81-008a, were determined using the levels of emission reduction recommended in the control technique guidelines (CTG) document, "Control of Volatile Organic Compound Emissions from Manufacture of Pneumatic Rubber Tires," EPA-450/2-78-030, as the regulatory baseline. The CTG recommends an average overall emission reduction of about 70 percent from undertread cementing, tread end cementing, bead cementing, and green tire spraying operations. Sidewall cementing was not addressed in the CTG.

In establishing the baseline for the proposed standards, capture and control technology was assumed to be used for undertread cementing operations, tread end cementing operations, bead cementing operations, and green tire spraying operations where organic solvent-based sprays are used. However, many States where rubber tire manufacturing plants are located have adopted regulations in their State implementation plans (SIP's) that can be met without installing capture and control equipment at tread end cementing and bead cementing operations. The EPA believes that this emission reduction scenario is a more representative regulatory baseline for calculating the impacts of the new source performance standards (NSPS) and, therefore, has revised the emission reduction and cost calculations for the baseline.

Compared to the revised baseline, the standards will reduce nationwide emissions from newly constructed, modified, and reconstructed facilities by

1,710 megagrams (1,885 tons) in the fifth year after proposal. This represents a 46 percent reduction in emissions beyond the baseline. For a single medium-sized plant, the emission reduction compared to the baseline is about 367 megagrams (405 tons) per year. The standards will not result in an increase of water pollution, solid waste, or energy consumption.

Control costs calculated for the regulatory baseline assume that: (1) A separate capture and control system will be employed at each undertread cementing operation to reduce emissions; (2) 54 percent of the green tire spraying operations will use only water-based sprays and therefore incur no control system costs; and (3) 46 percent of the green tire spraying operations will use some organic solvent-based sprays and will utilize capture and control technology to reduce emissions. Control costs calculated for the NSPS assume that: (1) A separate capture and control system will be employed at each undertread cementing operation and each sidewall cementing operation; (2) good work practices will be used to minimize emissions at each tread end cementing operation and each bead cementing operation; (3) 54 percent of the green tire spraying operations will use only water-based sprays and therefore incur no control system costs; and (4) 46 percent of the green tire spraying operations will use some organic solvent-based sprays and will utilize capture and control technology to reduce emissions.

Compared to the regulatory baseline, total nationwide capital costs will increase by about \$6.1 million during the first 5 years after proposal. The total nationwide annualized cost in the fifth year will increase by about \$1.1 million. For a single medium-size plant, the fifth year annualized cost attributable to NSPS, including solvent recovery credits, will be about \$114,000. The average incremental cost effectiveness for the industry compared to the baseline is \$615 per megagram. For a medium-sized plant, the cost effectiveness compared to the baseline is \$315 per megagram. The nationwide costs represent single-line retrofits, and the medium-sized plant costs represent a new plant using one capture/control system for all like operations. No changes in price or reductions in return on investment (ROI) are projected compared to the baseline control level. Implementation of the standards is not expected to inhibit industry growth.

The environmental, energy, and economic impacts are discussed in greater detail in the promulgation BID,

"Rubber Tire Manufacturing Industry—Background for Promulgated Standards," EPA-450/3-81-008b.

Public Participation

Before proposal of the standards, interested parties were advised by public notice in the Federal Register (45 FR 73133, November 4, 1980) of a meeting of the National Air Pollution Control Techniques Advisory Committee to discuss the standards recommended for proposal. The meeting was held December 2-3, 1980. The meeting was open to the public and each attendee was given an opportunity to comment on the standards recommended for proposal. The standards were proposed in the Federal Register on January 20, 1983 (48 FR 2676). The preamble to the proposed standards discussed the availability of the proposal BID, "Rubber Tire Manufacturing Industry—Background Information for Proposed Standards," EPA-450/3-81-008a, which described in detail the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal and, when requested, copies of the proposal BID were distributed to interested parties. To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was held on March 3, 1983, at Research Triangle Park, North Carolina. The hearing was open to the public and each attendee was given an opportunity to comment on the proposed standards. The public comment period was from January 20, 1983, to April 1, 1983.

Nine comment letters were received and two interested parties testified at the public hearing concerning issues relative to the proposed standards. The comments have been carefully considered and, where determined to be appropriate by the Administrator, changes have been made in the proposed standards. In addition, the EPA met with representatives of the Rubber Manufacturers' Association (RMA) on December 12, 1983, to discuss the feasibility of a compliance bubble for the rubber tire industry.

Major Comments and Changes to the Proposed Standards

Comments on the proposed standards were received from rubber tire manufacturers, a trade association, and from one State agency. A detailed discussion of these comments and responses can be found in the promulgation BID, which is referred to in the ADDRESSES section of this preamble. The summary of comments and

responses in the promulgation BID service as the basis for the revisions which have been made to the standards between proposal and promulgation. The major comments and responses are summarized in this preamble.

Significant changes in the standards since proposal include a change in the definition of an affected green tire spraying facility; the addition of emission limits for green tire spraying operations where organic solvent-based green tire sprays are used; a change in the format of the VOC use rate cutoffs for undertread cementing and sidewall cementing; the addition of a VOC use rate cutoff for green tire spraying operations, Michelin-A operations, Michelin-B operations, and Michelin-C-automatic operations; and the addition of an alternative compliance method for green tire spraying operations that use organic solvent-based sprays. Emission limits, a VOC use cutoff, and an alternative compliance method for green tire spraying facilities were added in response to industry claims that organic solvent-based sprays must be used in some circumstances. VOC use cutoffs for Michelin-A, -B, and -C-automatic facilities were added in response to receipt of more detailed information on the design and costs of the emission reduction systems that would be applied to these facilities.

The emission limit for bead cementing has been revised from a grams of VOC per tire limit to a grams of VOC per bead limit. The definition of "month" also has been changed. These changes are explained in the promulgation BID.

Several comments in favor of a compliance bubble for tire manufacturing plants were received. While a generic bubble is not being provided in the standards, as discussed under a later section in this preamble, "Bubble Considerations," the Administrator will consider requests for specific compliance bubbles on a case-by-case basis. Factors that the Agency would consider in approving specific bubble applications are discussed in a recently approved NSPS bubble application (52 FR 28946, August 4, 1987).

A statement has been added to the regulation (§ 60.543(1)) to clarify that the present emission reduction requirements and monthly VOC use cutoffs for undertread cementing, sidewall cementing, green tire spraying, Michelin-A, Michelin-B, and Michelin-C-automatic operations apply to all VOC used in cements and organic solvent-based green tire sprays, including that VOC used for tire types other than those defined in the regulation

[§ 60.541(a)(16)]. At proposal, the EPA believed that only those tires defined in the regulation would be processed at these operations and that other tire types would be processed only at different specialized operations. Since proposal, the EPA has learned that other tire types may be processed on the same equipment and in the same manner as those tires defined in the regulation. VOC emissions from cementing/spraying other tire types at these operations can be captured and controlled in the same manner as VOC emissions from cementing/spraying those tires defined in the regulation. Furthermore, total VOC use data, which are independent of tire size and use, were used to develop the percent emission reduction requirements and monthly VOC use cutoffs.

A second statement has been added to the regulation [§ 60.543(m)] to clarify that only those tires defined in the regulation should be counted in determining the total number of tread ends cemented, beads cemented, green tires sprayed with inside water-based spray, and green tires sprayed with outside water-based sprays each month. The g/tire and g/bead emissions limits for these operations are based on production and VOC use data only for the types of tires defined in the regulation. Therefore, other tire types should not be counted when determining compliance with the g/tire or g/bead limits.

Neither of these clarifications alters the applicability of the standards as proposed. For an operation to be considered an affected facility, it must, at some time, process a type of tire as defined in the regulation. If no tires, as defined in the regulation, are ever processed at a particular operation, then it is not an affected facility. In any subsequent revision of these standards (e.g., the 4-year review), the EPA will consider expanding the scope of the definition of the affected facilities for those operations which have percent emission reduction requirements and monthly VOC use cutoffs to include operations where only tire types other than those now defined in the regulation are processed.

At proposal, owners and operators who use a carbon adsorber to achieve compliance with a percent reduction requirement by meeting equipment specifications would have been required, upon EPA promulgation of the necessary continuous monitor performance specifications, to install an emissions monitor to measure the VOC concentration of the exhaust gases. The Agency has not developed such

continuous monitor performance specifications for VOC. However, organics monitoring devices are available that can serve as concentration level indicators for determining proper operation and maintenance without the necessity for performance specifications. In addition, these monitoring devices are substantially less costly to operate than emissions monitors and can be operated more easily. Thus, the final standards have been revised to require the installation of organics concentration monitoring devices (where carbon adsorbers are used to achieve compliance with a percent reduction requirement by meeting equipment specifications) for the purpose of determining proper operation and maintenance of the carbon adsorbers.

VOC Use Cutoffs and Definition of the Total Number of Tires Processed (T₀)

Several commenters contended that the proposed method of counting tires at an affected facility to determine the gram per tire VOC usage rate [T₀ in § 60.542(c)(2)] would penalize tire manufacturers who eliminate organic solvent application for part of their production at a particular affected facility. Several commenters subsequently requested that the EPA delete the phrase " * * * which receive an application of cement (green tire spray)" from the proposed definition of T₀. These commenters suggested that, for the purpose of performance test calculations in § 60.543(c)(2), T₀ should equal the total number of tires or tire components processed at an affected facility. One commenter contended that under the proposed definition of T₀, an affected facility theoretically could be required to install VOC control technology when less than 10 percent of the tires or tire components passing through the affected facility actually are cemented. Another commenter showed that under the proposed definition of T₀, add-on emission controls would be required for one of his plants' undertread cementing operations even though 60 percent of the production is not cemented. This commenter explained that if 0.1 gram of VOC were applied to each tire presently not cemented at the facility, no add-on controls would be required because the proposed definition of T₀ would count all tires cemented. The commenter remarked that, based on the example presented above, the proposed definition of T₀ would have a result which is contrary to the EPA's intent to have tire manufacturers reduce or eliminate organic solvent use. This commenter stated that if the definition

of T₀ were revised as requested, credit would be given to his company for eliminating the application of undertread cement to a portion of its production and, consequently, no VOC controls would be required.

The proposed standards would require that VOC emissions be reduced by 75 percent at affected undertread cementing and sidewall cementing facilities where in each calendar month VOC use exceeds an average of 25 g/tire [§ 60.542(a)(1) and (2)]. The percent emission reduction requirement reflects the application of BDT as required by the Clean Air Act.

The gram per tire VOC use cutoffs were provided to exempt from the emission reduction requirements facilities that would incur control costs which the Administrator judge to be too high for the emission reduction achieved. In selecting the 25 g/tire number, the EPA recognized that some tires receiving undertread or sidewall cement would receive less than 25 grams of VOC and others would receive greater than 25 grams of VOC, but, on the average, VOC use would be 25 g/tire, assuming that all tires received an application of cement.

The commenter presented a situation where a large portion of the tire production does not receive undertread cement. However, VOC use is greater than 25 g/tire for the portion of production receiving cement, the only tires that would be counted under the proposed definition of T₀. In this situation, the EPA agrees that the proposed definition of T₀ could result in requiring a manufacturer to reduce VOC emissions where the control costs were judged unreasonable for the emission reduction achieved.

With this concern in mind, the EPA has revised the cutoffs. The revised cutoffs are based on total (uncontrolled) monthly VOC usage at the facility. The total (uncontrolled) monthly VOC use cutoffs are equivalent to the proposed 25 g/tire cutoffs, as they were developed using the same bases (production rates, etc.) that were used to determine the proposed 25 g/tire cutoffs. In addition, the VOC use cutoff number reflect the same cost-effectiveness value as the 25 g/tire cutoff numbers. Furthermore, the VOC use format better reflects the EPA's basis (total solvent use, regardless of the number of tires processed) for exemption facilities that would incur control costs judged too high for the amount of emission reduction that would be achieved. This format also eliminates the commenter's problem of having to reduce emissions by 75 percent where total VOC use

could be relatively "small", but the amount of VOC applied per tire could exceed the proposed 25 g/tire cutoff.

The monthly VOC use cutoff figure would depend on whether a calendar month schedule or a "4-4-5" week production schedule is used for compliance and the number of days in a calendar month. Where VOC use at each undertread cementing facility is equal to or less than the following monthly cutoffs, 75 percent emission reduction is not required at that facility:

Number of days per month	VOC use limit
28.....	3,870 kg
29.....	4,010 kg
30.....	4,150 kg
31.....	4,280 kg
35.....	4,840 kg (for 5-week production months only).

Where VOC use at each sidewall cementing facility is equal to or less than the following monthly cutoffs, 75 percent emission reduction is not required at that facility:

Number of days per month	VOC use limit
28.....	3,220 kg
29.....	3,340 kg
30.....	3,450 kg
31.....	3,570 kg
35.....	4,030 kg (for 5-week production months only).

The standards for bead cementing operations, tread end cementing operations, and green tire spraying operations that use water-based sprays require tire manufacturers to maintain VOC emissions from these operations at or below the levels selected as representative of BDT. VOC consumption and tire production data supplied by the industry indicated that, on the average, VOC emissions of 10 g/tire or less for tires receiving tread end cement and emissions of 5 g/bead or less for beads receiving cement are achievable. The data also show that VOC emissions of 1.2 g/tire or less for tires receiving water-based inside green tire sprays and emissions of 9.3 g/tire or less for tires receiving water-based outside green tire sprays are achievable. Commenters have not provided information indicating that these levels are not achievable. Consequently, T₀ for bead cementing, tread end cementing, and water-based green tire spraying will remain as the number of tires or components receiving an application of cement or spray.

Organic Green Tire Spraying Emission Limits

Several commenters requested that the proposed standards for inside and outside green tire spraying be revised to

include provisions for use of organic solvent-based green tire sprays. One commenter was concerned that the proposed standards assume that all affected green tire spraying operations can use water-based sprays and that the proposed emission limits (1.2 g/tire for inside sprays, 9.3 g/tire for outside sprays) are significantly more stringent than could be achieved by using organic solvent-based sprays in conjunction with the best capture and control devices.

The proposed standards for inside and outside green tire spraying were based on industry-supplied information indicating that water-based sprays were replacing organic solvent-based sprays at most operations. While the EPA still believes that use of water-based sprays will predominate, it recognizes that organic solvent-based green tire sprays must be used in some cases. Consequently, a standard of performance has been developed for green tire spraying operations where organic solvent-based sprays are used. The EPA has determined that 75 percent emission reduction, based on 80 percent capture and 95 percent control, represent the best system of continuous emission reduction for organic solvent-based green tire sprays. Accordingly, the standard requires a 75 percent emission reduction at a facility where VOC use from organic solvent-based sprays exceeds the monthly cutoffs. In addition, an alternative compliance method is provided.

The following monthly total (uncontrolled) VOC use cutoffs represent the combined VOC use rate for organic solvent-based inside and outside spray applications below which the cost to reduce VOC emissions by 75 percent from a single green tire spraying facility has been judged unreasonable for the emission reduction achieved:

Number of days per month	VOC use limit
28.....	3,220 kg
29.....	3,340 kg
30.....	3,450 kg
31.....	3,570 kg
35.....	4,030 kg (for 5-week production months only).

Costs used to develop the cutoffs were based upon a retrofit situation, where VOC emissions captured in an enclosed booth are vented to a baghouse for particulate removal and then to a carbon adsorber for recovery.

The EPA is including equipment requirements as an alternate method of demonstrating compliance with the standards for green tire spraying operations. This alternative compliance method is similar to that included in the

alternative compliance method for undertread cementing and sidewall cementing [§ 60.543(j)].

Under the alternative compliance method, the owner or operator of an affected green tire spraying facility can seek to demonstrate compliance with the standards for green tire spraying facilities where organic solvent-based sprays are used by meeting the following design and equipment requirements:

1. Enclosure (i.e., the capture system) of the spray application and drying areas;
2. 100 feet per minute (fpm) face velocity through all permanent openings in the capture system;
3. Coated green tires retained in capture system for at least 30 seconds;
4. The total area of all permanent openings into the enclosure does not exceed the area necessary to maintain the VOC concentration of the exhaust stream at 25 percent of the lower explosive limit (LEL) when the facility is operating at its maximum solvent use rate, the face velocity through all permanent openings is 100 fpm, and all temporary openings are closed; and
5. Captured VOC vented to a 95 percent efficient control device. The 100 foot per minute face velocity requirement for all permanent openings and the 30-second retention time requirement for coated green tires are to assure optimal capture of VOC. The purpose of the maximum permanent opening area requirement is to minimize the escape of fugitive emissions from the enclosure. Twenty-five percent of the LEL was selected as the reference point for sizing permanent openings because it represents the level of dilution most commonly used to avoid fire and explosion hazards. Ninety-five percent control of captured VOC is required as this is considered best demonstrated technology. A particulate removal device, such as a scrubber, a filter, cyclone, or baghouse, may be needed in some cases to pretreat the green tire spray exhaust stream prior to its entering the VOC control device in order to avoid fouling of the VOC control device by particulates in the green tire overspray. However, exhaust stream pretreatment for particulate removal is not required by these standards.

Bubble Considerations

Most of the commenters requested that a general bubble provision be added to the standards before promulgation. Such a provision would set a special emission limit or limits solely for use in bubbles. The commenters believe that a bubble is

appropriate for this industry because there is a large number of small affected facilities, and they claim that the cost of capture and control technology may vary widely from facility to facility. A bubble provision could encourage firms subject to this NSPS to remove additional emissions at those new facilities where reduction is least costly, in exchange for not controlling facilities where control is more costly. The commenters state that the control flexibility provided by a bubble would provide the potential for large cost savings to the industry.

The Agency has recently approved an NSPS bubble application (52 FR 28946, August 4, 1987). In doing this, the Agency made clear that we will receive case-by-case applications for NSPS compliance bubbles. The major factors that will influence decisions on whether to approve them were also described. The Agency will consider bubbles for rubber tire manufacturing facilities on a case-by-case basis in accordance with such factors.

One factor relevant to the bubbles suggested by the commenters is that EPA will approve only NSPS bubbles that result in an emission reduction at least as great as would have resulted from facility-by-facility application of the NSPS. The two specific examples of potential rubber tire bubbles suggested during the public comment period however would have resulted in more emissions than would have occurred under the facility-by-facility application of the NSPS. Therefore, these bubbles were not approvable. Our reasons for this conclusion and responses are described below for the information of future applicants.

The first suggestion proposed a trade of emissions between an undertread cementing facility and a tread end cementing facility. The uncontrolled VOC emissions from the facilities would be 63 g/tire and 15.1 g/tire, respectively. The commenter used the proposed 25 g/tire VOC use cutoff level as the emission limit for the undertread cementing facility and combined that level with the 10 g/tire limit for tread end cementing for a bubble limit of 35 g/tire. The commenter would install a 75 percent efficient capture and control system at the undertread cementing facility to reduce emissions to 15.7 g/tire. The 15.7 g/tire emission rate combined with the uncontrolled emission rate of 15.1 g/tire at the tread end cementing facility ($15.7 + 15.1 = 30.8$) would be less than the commenter's claimed 35 g/tire bubble limit, thereby allowing the commenter to avoid reducing emissions from the tread end cementing facility. This example

used the proposed 25 g/tire VOC use cutoff (now revised to a monthly VOC use level) as an allowable emission level for an undertread cementing facility that uses a capture/control system, instead of the 15.7 g/tire level that would be required by the standards (75 percent reduction from the uncontrolled level of 63 g/tire). Under the facility-by-facility standards, the combined emissions from undertread cementing and tread end cementing would be, at most, 25.7 g/tire ($15.7 + 10 = 25.7$); under the commenter's proposed bubble, the emissions would be 30.8 g/tire, or at least 5 g/tire greater than the emissions under the facility-by-facility application of the standards.

Furthermore, the commenter's use of the VOC use cutoff numbers as emission limits for facilities for the capture/control systems is a misapplication of the cutoffs. The cutoff numbers represent a VOC use rate at which the cost of operating a capture/control system was judged to be too high for the emission reduction achieved; that is, if a facility uses only 25 g/tire or less, no further emission reduction would be required. However, facilities using more than 25 g/tire are required to reduce emissions by 75 percent because capture and control costs are reasonable for these facilities. Thus, the commenter is applying the wrong emission limit to undertread cementing, since his uncontrolled level is 63 g/tire.

The second example proposed to allow a plant owner/operator to obtain emission credits for operations that are not performed at a particular tire plant. This commenter no longer cements beads as part of the manufacturing process and wanted to obtain credit equal to the 10 g/tire bead cementing limit for use at another new facility (presumably to avoid installing BDT controls at an undertread cementing or sidewall cementing facility).

The approach of generating NSPS emission reduction credit from avoiding construction of certain emitting facilities would not be permitted where the credits would clearly result in increased emissions. If credit were given for production facilities which have not been built, other facilities which have been built might not need to install BDT. For example, if the 5 g/bead limit for bead cementing (again, this figure is equivalent, in most cases, to 10 g/tire) in the above proposal were given as a credit to be applied elsewhere, emissions from the plant could be 10 g/tire higher under a bubble than they would be under the facility-by-facility standards.

Docket

The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and the EPA responses to significant comments, the contents of the docket will serve as the record in case of judicial review [section 307(d)(7)(A)].

Miscellaneous

The effective date of this regulation is September 15, 1987. Section 111 of the Clean Air Act provides that standards of performance or revisions thereof become effective upon promulgation and apply to affected facilities, construction or modification of which was commenced after the date of proposal, January 20, 1983.

As prescribed by section 111, the promulgation of these standards was preceded by the Administrator's determination (40 CFR 60.16, 44 FR 49222, dated August 21, 1979) that the rubber tire manufacturing segment of the synthetic rubber source category contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. In accordance with section 117 of the Act, publication of these promulgated standards was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies.

This regulation will be reviewed 4 years from the date of promulgation as required by the Clean Air Act. This review will include an assessment of such factors as the need for integration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology, and reporting requirements.

Information collection requirements associated with this regulation (those included in 40 CFR 60.7, 60.545, and 60.546) have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2060-0156.

Section 317 of the Clean Air Act requires the Administrator to prepare an economic impact assessment for any new source standard of performance promulgated under section 111(b) of the Act. An economic impact assessment was prepared for this regulation and for other regulatory alternatives. All aspects of the assessment were considered in determining BDT. The economic impact assessment is included in the background information document for the proposed standards.

In addition to economics, the cost-effectiveness numbers of alternative standards were also evaluated to assure that the controls required by this rule are reasonable relative to other VOC regulations. In this case, the standards would increase the rubber tire manufacturers' operating costs, producing an average cost effectiveness in the fifth year of about \$615 per megagram of VOC emission reduction if recovery credits are assumed. Additional detail on costs can be found in the background information document.

Percent Emission Reduction Standards.

As discussed in the preamble to the proposed standards, the percent emission reduction format was selected as the format of the standards for undertread cementing operations, sidewall cementing operations, organic-based green tire spraying operations, Michelin-A operations, Michelin-B operations, and Michelin-C-automatic operations. For each of these affected facilities, there exists a wide variability of VOC use among manufacturers and, in some cases, among individual plants. Because of the difficulty in identifying the reasons for this variability and because of concerns regarding potential tire safety implications, the EPA sought to establish standards that would not require affected facilities to restrict VOC use. Given these conditions, the percent emission reduction format conforms better than other formats with the Clean Air Act requirement in section 111(a) that "a standard of performance shall reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction . . .) the Administrator determines has been adequately demonstrated."

However, there may be two disadvantages associated with percent emission reduction standards. First, percent emission reduction requirements may not provide a strong incentive to reduce VOC use. However, reducing

VOC use at any of these facilities would offer the potential for lower costs due to the reduction in the amount of solvent required. It would also allow the owner or operator to achieve the required percent emission reduction with a smaller capture system and control device. While the resulting cost savings could be substantial, they may not offer sufficient incentive to use less VOC or to employ tackifying processes that do not require the use of VOC. For example, those tire manufacturers using the largest amounts of VOC at their cementing operations may not attempt to use less VOC since they would still be required to operate a 75 percent efficient capture/control system. However, the inclusion of low VOC use cutoffs provides an economic incentive for many sources to reduce VOC usage. A second potential disadvantage with percent emission reduction standards is that they may not contribute to cost-efficiency goals which aim to equate the marginal costs per unit of emission reduction among polluters. The percent emission reduction format, while equalizing costs, tends to increase, rather than minimize, differences in marginal cost-effectiveness values, i.e., the costs of making equal percent reductions are unequal. For rubber tire manufacturers, the costs per ton of VOC removed are greater for medium VOC users than for high VOC users (although the total costs are lower for medium users).

On balance, due to the wide variability in VOC use and the EPA's efforts to take into consideration the industry's tire safety concerns, the advantages of percent emission reduction standards for the rubber tire manufacturing industry are judged to outweigh the disadvantages.

"Major Rule" Determination

Under Executive Order 12291, the EPA is required to judge whether a regulation is a "major rule" and therefore subject to certain requirements of the Order. The Agency has determined that this regulation would result in none of the adverse economic effects set forth in section 1 of the Order as grounds for finding a regulation to be "major rule." Fifth-year annualized costs of the standard, compared to an uncontrolled situation, would be about \$1.4 million. The product wholesale price is not expected to increase. The Agency has therefore concluded that the proposed regulation is not a "major rule" under Executive Order 12291.

This regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291. Any comments from the OMB to

the EPA and any EPA response to those comments are available for public inspection in Docket No. A-80-9, EPA's Central Docket Section, West Tower Lobby, Gallery 1, Waterside Mall, 401 M Street, SW., Washington, DC 20460.

Regulatory Flexibility Analysis Certification

The Regulatory Flexibility Act of 1980 requires that adverse effects of all Federal regulations upon small businesses be identified. According to current Small Business Administration guidelines, a small business in the SIC category 3011, "Tires and innertubes," is one that has 1,000 employees or less. This is the criterion to qualify for SBA loans or for the purpose of government procurement. Of the 16 tire manufacturing companies, 3 existing companies have less than 1,000 employees. An industry representative has stated that employment in a typical new plant is expected to average 1,400, with a range of 1,000 to 2,000. Thus, it is unlikely that any new plant would be considered a small entity. Existing small entities are not expected to become subject to the NSPS through new construction, modification, or reconstruction. However, if a small business did become subject to the NSPS, the cost of compliance would have minimal impacts.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that the attached rule will not have a significant economic impact on a substantial number of small entities.

List of Subjects in 40 CFR Part 60

Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping, Rubber tire manufacturing (SIC 3011).

Date: September 1, 1987.

Lee M. Thomas,
Administrator.

For reasons set out in the preamble, 40 CFR Part 60 is amended as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for Part 60 continues to read as follows:

Authority: 41 U.S.C. 7411, 7414, and 7601(a).

2. 40 CFR Part 60 is amended by adding a new Subpart BBB to read as follows:

Subpart BBB—Standards of Performance for the Rubber Tire Manufacturing Industry

Sec.
60.540 Applicability and designation of affected facilities.

Sec.	
60.541	Definitions.
60.542	Standards for volatile organic compounds.
60.543	Performance test and compliance provisions.
60.544	Monitoring of operations.
60.545	Recordkeeping requirements.
60.546	Reporting requirements.
60.547	Test methods and procedures.
60.548	Delegation of authority.

Subpart BBB—Standards of Performance for the Rubber Tire Manufacturing Industry

§ 60.540 Applicability and designation of affected facilities.

(a) The provisions of this subpart apply to the following affected facilities in rubber tire manufacturing plants: each undertread cementing operation, each sidewall cementing operation, each tread end cementing operation, each bead cementing operation, each green tire spraying operation, each Michelin-A operation, each Michelin-B operation, and each Michelin-C-automatic operation.

(b) The provisions of this subpart apply to each facility identified in paragraph (a) of this section that commences construction or modification after January 20, 1983.

(c) Although the affected facilities listed under § 60.540(a) are defined in reference to the production of components of a "tire," as defined under § 60.541(a), the percent emission reduction requirements and VOC use cutoffs specified under § 60.542(a)(1), (2), (6), (7)(iii), (7)(iv), (8), (9), and (10) refer to the total amount of VOC used (the amount allocated to the affected facility), including the VOC used in cements and organic solvent-based green tire spray materials for tire types not listed in the § 60.541(a) definition of "tire."

§ 60.541 Definitions.

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

"Bead" means rubber-covered strands of wire, wound into a circular form, which ensure a seal between a tire and the rim of the wheel onto which the tire is mounted.

"Bead cementing operation" means the system that is used to apply cement to the bead rubber before or after it is wound into its final circular form. A bead cementing operation consists of a cement application station, such as a dip tank, spray booth and nozzles, cement trough and roller or swab applicator, and all other equipment necessary to apply cement to wound beads or bead

rubber and to allow evaporation of solvent from cemented beads.

"Component" means a piece of tread, combined tread/sidewall, or separate sidewall rubber, or other rubber strip that is combined into the sidewall of a finished tire.

"Drying area" means the area where VOC from applied cement or green tire sprays is allowed to evaporate.

"Enclosure" means a structure that surrounds a VOC (cement, solvent, or spray) application area and drying area, and that captures and contains evaporated VOC and vents it to a control device. Enclosures may have permanent and temporary openings.

"Green tire" means an assembled, uncured tire.

"Green tire spraying operation" means the system used to apply a mold release agent and lubricant to the inside and/or outside of green tires to facilitate the curing process and to prevent rubber from sticking to the curing press. A green tire spraying operation consists of a booth where spraying is performed, the spray application station, and related equipment, such as the lubricant supply system.

"Michelin-A operation" means the operation identified as Michelin-A in the Emission Standards and Engineering Division confidential file as referenced in Docket A-80-9, Entry II-B-12.

"Michelin-B operation" means the operation identified as Michelin-B in the Emission Standards and Engineering Division confidential file as referenced in Docket A-80-9, Entry II-B-12.

"Michelin-C-automatic operation" means the operation identified as Michelin-C-automatic in the Emission Standards and Engineering Division confidential file as referenced in Docket A-80-9, Entry II-B-12.

"Month" means a calendar month or a prespecified period of 28 days or 35 days (utilizing a 4-4-5-week recordkeeping and reporting schedule).

"Organic solvent-based green tire spray" means any mold release agent and lubricant applied to the inside or outside of green tires that contains more than 12 percent, by weight, of VOC as sprayed.

"Permanent opening" means an opening designed into an enclosure to allow tire components to pass through the enclosure by conveyor or other mechanical means, to provide access for permanent mechanical or electrical equipment, or to direct air flow into the enclosure. A permanent opening is not equipped with a door or other means of obstruction of air flow.

"Sidewall cementing operation" means the system used to apply cement to a continuous strip of sidewall

component or any other continuous strip component (except combined tread/sidewall component) that is incorporated into the sidewall of a finished tire. A sidewall cementing operation consists of a cement application station and all other equipment, such as the cement supply system and feed and takeaway conveyors, necessary to apply cement to sidewall strips or other continuous strip component (except combined tread/sidewall component) and to allow evaporation of solvent from the cemented rubber.

"Temporary opening" means an opening into an enclosure that is equipped with a means of obstruction, such as a door, window, or port, that is normally closed.

"Tire" means any agricultural, airplane, industrial, mobile home, light-duty truck and/or passenger vehicle tire that has a bead diameter less than or equal to 0.5 meter (m) (19.7 inches) and a cross section dimension less than or equal to 0.325 m (12.8 in.), and that is mass produced in an assembly-line fashion.

"Tread end cementing operation" means the system used to apply cement to one or both ends of the tread or combined tread/sidewall component. A tread end cementing operation consists of a cement application station and all other equipment, such as the cement supply system and feed and takeaway conveyors, necessary to apply cement to tread ends and to allow evaporation of solvent from the cemented tread ends.

"Undertread cementing operation" means the system used to apply cement to a continuous strip of tread or combined tread/sidewall component. An undertread cementing operation consists of a cement application station and all other equipment, such as the cement supply system and feed and takeaway conveyors, necessary to apply cement to tread or combined tread/sidewall strips and to allow evaporation of solvent from the cemented tread or combined tread/sidewall.

"VOC emission control device" means equipment that destroys or recovers VOC.

"VOC emission reduction system" means a system composed of an enclosure, hood, or other device for containment and capture of VOC emissions and a VOC emission control device.

"Water-based green tire spray" means any mold release agent and lubricant applied to the inside or outside of green tires that contains 12 percent or less, by weight, of VOC as sprayed.

(b) Notations used under this subpart are defined below:

B_o = total number of beads cemented at a particular bead cementing affected facility for a month

C_a = concentration of VOC in gas stream in vents after a control device (parts per million by volume)

C_b = concentration of VOC in gas stream in vents before a control device (parts per million by volume)

C_r = concentration of VOC in each gas stream vented directly to the atmosphere from an affected facility or from a temporary enclosure around an affected facility (parts per million by volume)

D_c = density of cement or spray material (grams per litre)

D_r = density of VOC recovered by an emission control device (grams per litre)

E = emission control device efficiency, inlet versus outlet (fraction)

F_c = capture efficiency, VOC captured and routed to one control device versus total VOC used for an affected facility (fraction)

F_o = fraction of total mass of VOC used in a month by all facilities served by a common cement or spray material distribution system that is used by a particular affected facility served by the common distribution system

G = monthly average mass of VOC used per tire cemented or sprayed with a water-based green tire spray for a particular affected facility (grams per tire)

G_b = monthly average mass of VOC used per bead cemented for a particular bead cementing affected facility (grams per bead)

L_c = volume of cement or spray material used for a month (liters)

L_r = volume of VOC recovered by an emission control device for a month (liters)

M = total mass of VOC used for a month by all facilities served by a common cement or spray material distribution system (grams)

M_o = total mass of VOC used at an affected facility for a month (grams)

M_r = mass of VOC recovered by an emission control device for a month (grams)

N = mass of VOC emitted to the atmosphere per tire cemented or sprayed with a water-based green tire spray for an affected facility for a month (grams per tire)

N_b = mass of VOC emitted per bead cemented for an affected facility for a month (grams per bead)

Q_a = volumetric flow rate in vents after a control device (dry standard cubic meters per hour)

Q_b = volumetric flow rate in vents before a control device (dry standard cubic meters per hour)

Q_r = volumetric flow rate of each stream vented directly to the atmosphere from an affected facility or from a temporary enclosure around an affected facility (dry standard cubic meters per hour)

R = overall efficiency of an emission reduction system (fraction)

T_a = total number of days in monthly compliance period (days)

T_o = total number of tires cemented or sprayed with water-based green tire sprays at a particular affected facility for a month

W_o = weight fraction of VOC in a cement or spray material.

§ 60.542 Standards for volatile organic compounds.

(a) On and after the date on which the initial performance test, required by § 60.8, is completed, but no later than 180 days after initial startup, each owner or operator subject to the provisions of this subpart shall comply with the following conditions:

- (1) For each undertread cementing operation:
 - (i) Discharge into the atmosphere no more than 25 percent of the VOC used (75 percent emission reduction) for each month; or
 - (ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period:
 - (A) 3,870 kilograms of VOC per 28 days,
 - (B) 4,010 kilograms of VOC per 29 days,
 - (C) 4,150 kilograms of VOC per 30 days,
 - (D) 4,280 kilograms of VOC per 31 days, or
 - (E) 4,840 kilograms of VOC per 35 days.
- (2) For each sidewall cementing operation:
 - (i) Discharge into the atmosphere no more than 25 percent of the VOC used (75 percent emission reduction) for each month; or
 - (ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period:
 - (A) 3,220 kilograms of VOC per 28 days,
 - (B) 3,340 kilograms of VOC per 29 days,
 - (C) 3,450 kilograms of VOC per 30 days,
 - (D) 3,570 kilograms of VOC per 31 days, or
 - (E) 4,030 kilograms of VOC per 35 days.

- (3) For each tread end cementing operation: Discharge into the atmosphere no more than 10 grams of VOC per tire (g/tire) cemented for each month.
- (4) For each bead cementing operation: Discharge into the atmosphere no more than 5 grams of VOC per bead (g/bead) cemented for each month.
- (5) For each green tire spraying operation where only water-based sprays are used:
 - (i) Discharge into the atmosphere no more than 1.2 grams of VOC per tire sprayed with an inside green tire spray for each month; and
 - (ii) Discharge into the atmosphere no more than 9.3 grams of VOC per tire sprayed with an outside green tire spray for each month.
- (6) For each green tire spraying operation where only organic solvent-based sprays are used:
 - (i) Discharge into the atmosphere no more than 25 percent of the VOC used (75 percent emission reduction) for each month; or
 - (ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period:
 - (A) 3,220 kilograms of VOC per 28 days,
 - (B) 3,340 kilograms of VOC per 29 days,
 - (C) 3,450 kilograms of VOC per 30 days,
 - (D) 3,570 kilograms of VOC per 31 days, or
 - (E) 4,030 kilograms of VOC per 35 days.
 - (7) For each green tire spraying operation where both water-based and organic solvent-based sprays are used:
 - (i) Discharge into the atmosphere no more than 1.2 grams of VOC per tire sprayed with a water-based inside green tire spray for each month; and
 - (ii) Discharge into the atmosphere no more than 9.3 grams of VOC per tire sprayed with a water-based outside green tire spray for each month; and either
 - (iii) Discharge into the atmosphere no more than 25 percent of the VOC used in the organic solvent-based green tire sprays (75 percent emission reduction) for each month; or
 - (iv) Maintain total (uncontrolled) VOC use for all organic solvent-based green tire sprays less than or equal to the levels specified under paragraph (a)(6)(ii) of this section.
 - (8) For each Michelin-A operation:
 - (i) Discharge into the atmosphere no more than 35 percent of the VOC used

(65 percent emission reduction) for each month; or

(ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period:

(A) 1570 Kilograms of VOC per 28 days,

(B) 1630 Kilograms of VOC per 29 days,

(C) 1690 Kilograms of VOC per 30 days,

(D) 1740 Kilograms of VOC per 31 days, or

(E) 1970 Kilograms of VOC per 35 days.

(9) For each Michelin-B operation:

(i) Discharge into the atmosphere no more than 25 percent of the VOC used (75 percent emission reduction) for each month; or

(ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period:

(A) 1310 Kilograms of VOC per 28 days,

(B) 1360 Kilograms of VOC per 29 days,

(C) 1400 Kilograms of VOC per 30 days,

(D) 1450 Kilograms of VOC per 31 days, or

(E) 1640 Kilograms of VOC per 35 days.

(10) For each Michelin-C-automatic operation:

(i) Discharge into the atmosphere no more than 35 percent of the VOC used (65 percent emission reduction) for each month; or

(ii) Maintain total (uncontrolled) VOC use less than or equal to the levels specified under paragraph (a)(8)(ii) of this section.

§ 60.543 Performance test and compliance provisions.

(a) Section 60.8(d) does apply to the monthly performance test procedures required by this subpart. Section 60.8(d) does not apply to initial performance tests and to the performance tests specified under paragraphs (b)(2) and (b)(3) of this section. Section 60.8(f) does not apply when Method 24 is used.

(b) Performance tests shall be conducted as follows:

(1) The owner or operator of an affected facility shall conduct an initial performance test, as required under § 60.8(a), except as described under paragraph (j) of this section. The owner or operator of an affected facility shall thereafter conduct a performance test each month except as described under paragraphs (g)(1) and (j) of this section. Initial and monthly performance tests

shall be conducted according to the procedures in this section.

(2) The owner or operator of an affected facility who elects to use a VOC emission reduction system with a control device that destroys VOC (e.g., incinerator), as described under paragraphs (f) and (g) of this section, shall repeat the performance test when directed by the Administrator or when the owner or operator elects to operate the capture system or control device at conditions different from the most recent determination of overall reduction efficiency. The performance test shall be conducted in accordance with the procedures described under paragraphs (f)(2) (i) through (iii) of this section.

(3) The owner or operator of an affected facility who seeks to comply with the equipment design and performance specifications, as described under paragraph (j) of this section, shall repeat the performance test when directed by the Administrator or when the owner or operator elects to operate the capture system or control device at conditions different from the most recent determination of control device efficiency or measurement of capture system retention time or face velocity. The performance test shall be conducted in accordance with the procedures described under paragraph (f)(2)(ii) of this section.

(c) For each undertread cementing operation, each sidewall cementing operation, each green tire spraying operation where organic solvent-based sprays are used, each Michelin-A operation, each Michelin-B operation, and each Michelin-C-automatic operation where the owner or operator seeks to comply with the uncontrolled monthly VOC use (kg/mo) limits, the owner or operator shall use the following procedure to determine compliance with the applicable (depending upon duration of compliance period) uncontrolled monthly VOC use limit specified under § 60.542(a) (1)(ii), (2)(ii), (6)(ii), (7)(iv), (8)(ii), (9)(ii), and (10)(ii). If both undertread cementing and sidewall cementing are performed at the same affected facility during a month, then the kg/mo limit specified under § 60.542(a)(1)(ii) shall apply for that month.

(1) Determine the density and weight fraction VOC (including dilution VOC) of each cement or green tire spray from its formulation or by analysis of the cement or green tire spray using Method 24. If a dispute arises, the Administrator may require an owner or operator who used formulation data to analyze the cement or green tire spray using Method 24.

(2) Calculate the total mass of VOC used at the affected facility for the month (M_o) by the following procedure:

(i) For each affected facility for which cement or green tire spray is delivered in batch or via a distribution system that serves only the affected facility:

$$M_o = \sum_{i=1}^a L_{c_i} D_{c_i} W_{o_i}$$

where: "a" equals the number of different cements or green tire sprays used during the month that are delivered in batch or via a distribution system that serves only a single affected facility.

(ii) For each affected facility for which cement or green tire spray is delivered via a common distribution system that also serves other affected or existing facilities:

(A) Calculate the total mass of VOC used for all of the facilities served by the common distribution system for the month (M):

$$M = \sum_{i=1}^b L_{c_i} D_{c_i} W_{o_i}$$

where: "b" equals the number of different cements or green tire sprays used during the month that are delivered via a common distribution system that also serves other affected or existing facilities.

(B) Determine the fraction (F_o) of M used at the affected facility by comparing the production records and process specifications for the material cemented or sprayed at the affected facility for the month to the production records and process specifications for the material cemented or sprayed at all other facilities served by the common distribution system for the month or by another procedure acceptable to the Administrator.

(C) Calculate the total monthly mass of VOC used at the affected facility for the month (M_o):

$$M_o = MF_o$$

(3) Determine the time duration of the monthly compliance period (T_a).

(d) For each tread end cementing operation and each green tire spraying operation where water-based sprays are used (inside and/or outside) that do not use a VOC emission reduction system, the owner or operator shall use the following procedure to determine compliance with the g/tire limit

specified under § 60.542(a) (3), (5)(i), (5)(ii), (7)(i), and (7)(ii).

(1) Determine the density and weight fraction VOC as specified under paragraph (c)(1) of this section.

(2) Calculate the total mass of VOC used at the affected facility for the month (M_o) as specified under paragraph (c)(2) of this section.

(3) Determine the total number of tire cemented or sprayed at the affected facility for the month (T_o) by the following procedure:

(i) For a trend end cementing operation, T_o equals the number of tread or combined tread/sidewall components that receive an application of tread end cement for the month.

(ii) For a green tire spraying operation that uses water-based inside green tire sprays, T_o equals the number of green tires that receive an application of water-based inside green tire spray for the month.

(iii) For a green tire spraying operation that uses water-based outside green tire sprays, T_o equals the number of green tires that receive an application of water-based outside green tire spray for the month.

(4) Calculate the mass of VOC used per tire cemented or sprayed at the affected facility for the month (G):

$$G = \frac{M_o}{T_o}$$

(5) Calculate the mass of VOC emitted per tire cemented or sprayed at the affected facility for the month (N):

$$N = G$$

(e) For each bead cementing operation that does not use a VOC emission reduction system, the owner or operator shall use the following procedure to determine compliance with the g/bead limit specified under § 60.542(a)(4).

(1) Determine the density and weight fraction VOC as specified under paragraph (c)(1) of this section.

(2) Calculate the total mass of VOC used at the affected facility for the month (M_o) as specified under paragraph (c)(2) of this section.

(3) Determine the number of beads cemented at the affected facility during the month (B_o) using production records; B_o equals the number of beads that receive an application of cement for the month.

(4) Calculate the mass of VOC used per bead cemented at the affected facility for the month (G_b):

$$G_b = \frac{M_o}{B_o}$$

(5) Calculate the mass of VOC emitted per bead cemented at the affected facility for the month (N_b):

$$N_b = G_b$$

(f) For each tread end cementing operation and each bead cementing operation that use a VOC emission reduction system with a control device that destroys VOC (e.g., incinerator), the owner or operator shall use the following procedure to determine compliance with the emission limit specified under § 60.542(a) (3) and (4).

(1) Calculate the mass of VOC used per tire cemented at the affected facility for the month (G), as specified under paragraphs (d) (1) through (4) of this section, or mass of VOC used per bead cemented at the affected facility for the month (G_b), as specified under paragraphs (e) (1) through (4) of this section.

(2) Calculate the mass of VOC emitted per tire cemented at the affected facility for the month (N) or mass of VOC emitted per bead cemented at the affected facility for the month (N_b):

$$N = G (1-R)$$

$$N_b = G_b (1-R)$$

For the initial performance test, the overall reduction efficiency (R) shall be determined as prescribed under paragraphs (f)(2) (i) through (iii) of this section. In subsequent months, the owner or operator may use the most recently determined overall reduction efficiency (R) for the performance test except during conditions described under paragraph (b)(2) of this section.

(i) The owner or operator of an affected facility shall construct a temporary enclosure around the application and drying areas during the performance test for the purpose of capturing fugitive VOC emissions. The enclosure must be maintained at a negative pressure to ensure that all

evaporated VOC are measurable. Determine the fraction (F_c) of total VOC used at the affected facility that enters the control device:

$$F_c = \frac{\sum_{i=1}^m C_{b_i} Q_{b_i}}{\sum_{i=1}^m C_{b_i} Q_{b_i} + \sum_{i=1}^n C_{f_i} Q_{f_i}}$$

where: "m" is the number of vents from the affected facility to the control device, and "n" is the number of vents from the affected facility to the atmosphere and from the temporary enclosure.

(ii) Determine the destruction efficiency of the control device (E) by using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the control device:

$$E = \frac{\sum_{i=1}^m C_{b_i} Q_{b_i} - \sum_{i=1}^p C_{a_i} Q_{a_i}}{\sum_{i=1}^m C_{b_i} Q_{b_i}}$$

where: "m" is the number of vents from the affected facility to the control device, and "p" is the number of vents after the control device.

(iii) Determine the overall reduction efficiency (R):

$$R = EF_c$$

(g) For each undertread cementing operation, each sidewall cementing operation, each green tire spraying operation where organic solvent-based sprays are used, each Michelin-A operation, each Michelin-B operation, and each Michelin-C automatic operation that use a VOC emission reduction system with a control device that destroys VOC (e.g., incinerator), the owner or operator shall use the following procedure to determine compliance with the percent emission reduction requirement specified under § 60.542 (a) (1)(i), (2)(i), (6)(i), (7)(iii), (8)(i), (9)(i), and (10)(i).

(1) For the initial performance test, the overall reduction efficiency (R) shall be

determined as prescribed under paragraphs (f)(2) (i) through (iii) of this section. The performance test shall be repeated during conditions described under paragraph (b)(2) of this section. No monthly performance tests are required.

(h) For each tread and cementing operation and each bead cementing operation that uses a VOC emission reduction system with a control device that recovers VOC (e.g., carbon adsorber), the owner or operator shall use the following procedure to determine compliance with the emission limit specified under § 60.542(a) (3) and (4).

(1) Calculate the mass of VOC used per tire cemented at the affected facility for the month (G), as specified under paragraphs (d) (1) through (4) of this section, or mass of VOC used per bead cemented at the affected facility for the month (G_b), as specified under paragraphs (e) (1) through (4) of this section.

(2) Calculate the total mass of VOC recovered from the affected facility for the month (M_r):

$$M_r = L_r D_r$$

(3) Calculate the overall reduction efficiency for the VOC emission reduction system (R) for the month:

$$R = \frac{M_r}{M_o}$$

(4) Calculate the mass of VOC emitted per tire cemented at the affected facility for the month (N) or mass of VOC emitted per bead cemented at the affected facility for the month (N_b):

$$N = G (1-R)$$

$$N_b = G_b (1-R)$$

(i) For each undertread cementing operation, each sidewall cementing operation, each green tire spraying operation where organic solvent-based sprays are used, each Michelin-A operation, each Michelin-B operation, and each Michelin-C-automatic operation that use a VOC emission reduction system with a control device that recovers (VOC) (e.g., carbon

adsorber), the owner or operator shall use the following procedure to determine compliance with the percent reduction requirement specified under § 60.542(a) (1)(i), (2)(i), (6)(i), (7)(iii), (8)(i), (9)(i), and (10)(i).

(1) Determine the density and weight fraction VOC as specified under paragraph (c)(1) of this section.

(2) Calculate the total mass of VOC used at the affected facility for the month (M_o) as described under paragraph (c)(2) of this section.

(3) Calculate the total mass of VOC recovered from the affected facility for the month (M_r) as described under paragraph (h)(2) of this section.

(4) Calculate the overall reduction efficiency for the VOC emission reduction system (R) for the month as described under paragraph (h)(3) of this section.

(j) Rather than seeking to demonstrate compliance with the provisions of § 60.542(a) (1)(i), (2)(i), (6)(i), (7)(iii), or (9)(i) using the performance test procedures described under paragraphs (g) and (i) of this section, and owner or operator of an undertread cementing operation, sidewall cementing operation, green tire spraying operation where organic solvent-based sprays are used, or Michelin-B operation that use a VOC emission reduction system may seek to demonstrate compliance by meeting the equipment design and performance specifications listed under paragraphs (j)(1), (2), and (4) through (6) or under paragraphs (j)(1) and (3) through (6) of this section, and by conducting a control device efficiency performance test to determine compliance as described under paragraph (j)(7) of this section. The owner or operator shall conduct this performance test of the control device efficiency no later than 180 days after initial startup of the affected facility, as specified under § 60.8(a). Meeting the capture system design and performance specifications, in conjunction with operating a 95-percent efficient control device, is an acceptable means of demonstrating compliance with the standard. Therefore, the requirement for the initial performance test on the enclosure, as specified under § 60.8(a), is waived. No monthly performance test are required.

(1) For each undertread cementing operation, each sidewall cementing operation, and each Michelin-B operation, the cement application and drying area shall be contained in an enclosure that meets the criteria specified under paragraphs (j) (2), (4), and (5) of this section; for each green tire spraying operation where organic solvent-based sprays are used, the spray

application and drying area shall be contained in an enclosure that meets the criteria specified under paragraphs (j) (3), (4), and (5) of this section.

(2) The drying area shall be enclosed between the application area and the water bath or to the extent necessary to contain all tire components for at least 30 seconds after cement application, whichever distance is less.

(3) Sprayed green tires shall remain in the enclosure for a minimum of 30 seconds after spray application.

(4) A minimum face velocity of 100 feet per minute shall be maintained continuously through each permanent opening into the enclosure when all temporary enclosure openings are closed. The cross-sectional area of each permanent opening shall be divided into at least 12 equal areas, and a velocity measurement shall be performed at the centroid of each equal area with an anemometer or similar velocity monitoring device; the face velocity of each permanent opening is the average value of the velocity measurements taken. The monitoring device shall be calibrated and operated according to the manufacturer's instructions.

Temporary enclosure openings shall remain closed at all times except when worker access is necessary.

(5) The total area of all permanent openings into the enclosure shall not exceed the area that would be necessary to maintain the VOC concentration of the exhaust gas stream at 25 percent of the lower explosive limit (LEL) under the following conditions:

(i) The facility is operating at the maximum solvent use rate;

(ii) The face velocity through each permanent opening is 100 feet per minute; and

(iii) All temporary openings are closed.

(6) All captured VOC are ducted to a VOC emission control device that is operated on a continuous basis and that achieves at least a 95 percent destruction or recovery efficiency.

(7) The efficiency of the control device (E) for the initial performance test is determined by using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the control device as described under paragraph (f)(2)(ii) of this section. The control device efficiency shall be redetermined during conditions specified under paragraph (b)(3) of this section.

(k) Each owner or operator of an affected facility who initially elected to be subject to the applicable percent

emission reduction requirement specified under § 60.542(a)(1)(i), (2)(i), (6)(i), (7)(iii), (8)(i), (9)(i), or (10)(i) and who later seeks to comply with the applicable total (uncontrolled) monthly VOC use limit specified under § 60.542(a)(1)(ii), (2)(ii), (6)(ii), (7)(iv), (8)(ii), (9)(ii), or (10)(ii) shall demonstrate, using the procedures described under paragraph (c) of this section, that the total VOC use at the affected facility has not exceeded the applicable total (uncontrolled) monthly VOC use limit during each of the last 6 months of operation. The owner or operator shall be subject to the applicable percent emission reduction requirement until the conditions of this paragraph and § 60.546(h) are satisfied.

(l) In determining compliance for each undertread cementing operation, each sidewall cementing operation, each green tire spraying operation, each Michelin-A operation, each Michelin-B operation, and each Michelin-C-automatic operation, the owner or operator shall include all the VOC used, recovered, or destroyed from cements and organic solvent-based green tire sprays including those cements or sprays used for tires other than those defined under § 60.541(a).

(m) In determining compliance for each tread end cementing operation, each bead cementing operation, and each green tire spraying operation, the owner or operator shall include only those tires defined under § 60.541(a) when determining T_o and B_o .

§ 60.544 Monitoring of operations.

(a) Each owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator:

(1) Where a thermal incinerator is used for VOC emission reduction, a temperature monitoring device equipped with a continuous recorder for the temperature of the gas stream in the combustion zone of the incinerator. The temperature monitoring device shall have an accuracy of 1 percent of the temperature being measured in °C or ± 0.5 °C, whichever is greater.

(2) Where a catalytic incinerator is used for VOC emission reduction, temperature monitoring devices, each equipped with a continuous recorder, for the temperature in the gas stream immediately before and after the catalyst bed of the incinerator. The temperature monitoring devices shall have an accuracy of 1 percent of the

temperature being measured in °C or ± 0.5 °C, whichever is greater.

(3) For an undertread cementing operation, sidewall cementing operation, green tire spraying operation where organic solvent-based sprays are used, or Michelin-B operation where a carbon adsorber is used to meet the performance requirements specified under § 60.543(j)(6), an organics monitoring device used to indicate the concentration level of organic compounds based on a detection principle such as infrared, photoionization, or thermal conductivity, equipped with a continuous recorder, for the outlet of the carbon bed.

(b) An owner or operator of an undertread cementing operation, sidewall cementing operation, green tire spraying operation where organic solvent-based sprays are used, or Michelin-B operation where a VOC recovery device other than a carbon adsorber is used to meet the performance requirements specified under § 60.543(j)(6), shall provide to the Administrator information describing the operation of the control device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

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§ 60.545 Recordkeeping requirements.

(a) Each owner or operator of an affected facility that uses a thermal incinerator shall maintain continuous records of the temperature of the gas stream in the combustion zone of the incinerator and records of all 3-hour periods of operation for which the average temperature of the gas stream in the combustion zone was more than 28 °C (50 °F) below the combustion zone temperature measured during the most recent determination of the destruction efficiency of the thermal incinerator that demonstrated that the affected facility was in compliance.

(b) Each owner or operator of an affected facility that uses a catalytic incinerator shall maintain continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed of the incinerator, records of all 3-hour periods of operation for which the average temperature measured before the catalyst bed is more than 28 °C below the gas stream temperature measured before the catalyst bed during the most recent determination of destruction efficiency of the catalytic incinerator that demonstrated that the affected

facility was in compliance, and records of all 3-hour periods for which the average temperature difference across the catalyst bed is less than 80 percent of the temperature difference measured during the most recent determination of the destruction efficiency of the catalytic incinerator that demonstrated that the affected facility was in compliance.

(c) Each owner or operator of an undertread cementing operation, sidewall cementing operation, green tire spraying operation where organic solvent-based sprays are used, or Michelin-B operation that uses a carbon adsorber to meet the requirements specified under § 60.543(j)(6) shall maintain continuous records of all 3-hour periods of operation during which the average VOC concentration level or reading of organics in the exhaust gases is more than 20 percent greater than the exhaust gas concentration level or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the affected facility was in compliance.

(d) Each owner or operator of an undertread cementing operation, sidewall cementing operation, green tires spraying operation where organic solvent-based sprays are used, Michelin-A operation, Michelin-B operation, or Michelin-C-automatic operation who seeks to comply with a specified kg/mo uncontrolled VOC use limit shall maintain records of monthly VOC use and the number of days in each compliance period.

(e) Each owner or operator that is required to conduct monthly performance tests, as specified under § 60.543(b)(1), shall maintain records of the results of all monthly tests.

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§ 60.546 Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart, at the time of notification of the anticipated initial startup of an affected facility pursuant to § 60.7(a)(2), shall provide a written report to the Administrator declaring for each undertread cementing operation, each sidewall cementing operation, each green tires spraying operation where organic solvent-based spray are used, each Michelin-A operation, each Michelin-B operation, and each Michelin-C automatic operation the emission limit he intends to comply with and the compliance method (where § 60.543(j) is applicable) to be employed.

(b) Each owner or operator subject to the provisions of this subpart, at the time of notification of the anticipated initial startup of an affected facility pursuant to § 60.7(a)(2), shall specify the monthly schedule (each calendar month or a 4-4-5-week schedule) to be used in making compliance determinations.

(c) Each owner or operator subject to the provisions of this subpart shall report the results of all initial performance tests, as required under § 60.8(a), and the results of the performance test required under § 60.543(b)(2) and (b)(3). The following data shall be included in the report for each of the above performance tests:

(1) For each affected facility for which the owner or operator seeks to comply with a kg/mo uncontrolled VOC use limit specified under § 60.542(a): The monthly mass of VOC used (M_o) and the number days in the compliance period (T_d).

(2) For each affected facility that seeks to comply with a g/tire or g/bead limit specified under § 60.542(a) without the use of a VOC emission reduction system: the mass of VOC used (M_o), the number of tires cemented or sprayed (T_o), the mass of VOC emitted per tire cemented or sprayed (N), the number of beads cemented (B_o), and the mass of VOC emitted per bead cemented (N_b).

(3) For each affected facility that uses a VOC emission reduction system with a control device that destroys VOC (e.g., incinerator) to comply with a g/tire or g/bead limit specified under § 60.542(a): The mass of VOC used (M_o), the number of tires cemented or sprayed (T_o), the mass of VOC emitted per tire cemented or sprayed (N), the number of beads cemented (B_o), the mass of VOC emitted per bead cemented (N_b), the mass of VOC used per tire cemented or sprayed (G), the mass of VOC per bead cemented (G_b), the emission control device efficiency (E), the capture system efficiency (F_c), the face velocity through each permanent opening for the capture system with the temporary openings closed, and the overall system emission reduction (R).

(4) For each affected facility that uses a VOC emission reduction system with a control device that destroys VOC (e.g., incinerator) to comply with a percent emission reduction requirement specified under § 60.542(a): The emission control device efficiency (E), the capture system efficiency (F_c), the face velocity through each permanent opening in the capture system with the temporary openings closed, and the overall system emission reduction (R).

(5) For each affected facility that uses a carbon adsorber to comply with a g/tire or g/bead limit specified under

§ 60.542(a): The mass of VOC used (M_o), the number of tires cemented or sprayed (T_o), the mass of VOC used per tire cemented or sprayed (G), the number of beads cemented (B_o), the mass of VOC used per bead (G_b), the mass of VOC recovered (M_r), the overall system emission reduction (R), the mass of VOC emitted per tire cemented or sprayed (N), and the mass of VOC emitted per bead cemented (N_b).

(6) For each affected facility that uses a VOC emission reduction system with a control device that recovers VOC (e.g., carbon adsorber) to comply with a percent emission reduction requirement specified under § 60.542(a): The mass of VOC used (M_o), the mass of VOC recovered (M_r), and the overall system emission reduction (R).

(d) Each owner or operator of an undertread cementing operation, sidewall cementing operation, green tire spraying operation where organic solvent-based sprays are used, or Michelin-B operation who seeks to comply with the requirements described under § 60.543(j) shall include in the initial compliance report a statement specifying, in detail, how each of the equipment design and performance specifications has been met. The initial compliance report also shall include the following data: The emission control device efficiency (E), the face velocity through each permanent enclosure opening with all temporary enclosure openings closed, the total area of all permanent enclosure openings, the total area of all temporary enclosure openings, the maximum solvent use rate (kg/hr), the type(s) of VOC used, the lower explosive limit (LEL) for each VOC used, and the length of time each component is enclosed after application of cement or spray material.

(e) Each owner or operator of an affected facility shall include the following data measured by the required monitoring device(s), as applicable, in the report for each performance test specified under paragraph (c) of this section.

(1) The average combustion temperature measured at least every 15 minutes and averaged over the performance test period of incinerator destruction efficiency for each thermal incinerator.

(2) The average temperature before and after the catalyst bed measured at least every 15 minutes and averaged over the performance test period of incinerator destruction efficiency for each catalytic incinerator.

(3) The concentration level or reading indicated by the organics monitoring device at the outlet of the adsorber, measured at least every 15 minutes and

averaged over the performance test period of carbon adsorber recovery efficiency while the vent stream is normally routed and constituted.

(4) The appropriate data to be specified by the Administrator where a VOC recovery device other than a carbon adsorber is used.

(f) Once every 6 months each owner or operator subject to the provisions of § 60.545 shall report, as applicable:

(1) Each monthly average VOC emission rate that exceeds the g/tire or g/bead limit specified under § 60.542(a), as applicable for the affected facility.

(2) Each monthly average VOC use rate that exceeds the kg/mo VOC use limit specified under § 60.542(a), as applicable for the affected facility.

(3) Each monthly average VOC emission reduction efficiency for a VOC recovery device (e.g., carbon adsorber) less than the percent efficiency limit specified under § 60.542(a), as applicable for the affected facility.

(4) Each 3-hour period of operation for which the average temperature of the gas stream in the combustion zone of a thermal incinerator, as measured by the temperature monitoring device, is more than 28°C (50°F) below the combustion zone temperature measured during the most recent determination of the destruction efficiency of the thermal incinerator that demonstrated that the affected facility was in compliance.

(5) Each 3-hour period of operation for which the average temperature of the gas stream immediately before the catalyst bed of a catalytic incinerator, as measured by the temperature monitoring device, is more than 28°C (50°F) below the gas stream temperature measured before the catalyst bed during the most recent determination of the destruction efficiency of the catalyst incinerator that demonstrated that the affected facility was in compliance, and any 3-hour period for which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80 percent of the temperature difference measured during the most recent determination of the destruction efficiency of the catalytic incinerator that demonstrated that the affected facility was in compliance.

(6) Each 3-hour period of operation during which the average concentration level or reading of VOC's in the exhaust gases from a carbon adsorber is more than 20 percent greater than the exhaust gas concentration level or reading measured by the organics monitoring

device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the affected facility was in compliance.

(g) The requirements for semiannual reports remain in force until and unless EPA, in delegating enforcement authority to a State under Section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with these requirements, provided that they comply with the requirements established by the State.

(h) Each owner or operator of an affected facility who initially elected to be subject to the applicable percent emission reduction requirement specified under § 60.542(a) and who later seeks to comply with the applicable total (uncontrolled) monthly VOC use limit specified under § 60.542(a) and who has satisfied the provisions specified under § 60.543(k) shall furnish the Administrator written notification no less than 30 days in advance of the date when he intends to be subject to the applicable VOC use

limit instead of the applicable percent emission reduction requirement.

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§ 60.547 Test methods and procedures.

(a) The test methods in Appendix A to this part, except as provided under § 60.8(b), shall be used to determine compliance with § 60.542(a) as follows:

(1) Method 24 or formulation data for the determination of the VOC content of cements or green tire spray materials. In the event of dispute, Method 24 shall be the reference method. For Method 24, the cement or green tire spray sample shall be a 1-liter sample collected in a 1-liter container at a point where the sample will be representative of the material as applied in the affected facility.

(2) Method 25 as the reference method for the determination of the VOC concentrations in each stack, both entering and leaving an emission control device. The owner or operator shall notify the Administrator 30 days in advance of any test by Method 25. For Method 25, the sampling time for each of three runs shall be at least 1 hour. Method 1 shall be used to select the sampling site, and the sampling point

shall be the centroid of the duct or at a point no closer to the walls than 1 meter. The minimum sample volume shall be 0.003 dry standard cubic meter (dscm) except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(3) Method 2, 2A, 2C, or 2D, as appropriate, as the reference method for determination of the flow rate of the stack gas. The measurement site shall be the same as for the Method 25 sampling. A velocity traverse shall be made once per run within the hour that the Method 25 sample is taken.

(4) Method 4 for determination of stack gas moisture.

§ 60.548 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States: Section 60.543(c)(2)(ii)(B).

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