

## Environmental Protection Agency

## § 60.533

particulate matter emission limits as determined by the test methods and procedures in § 60.534:

(1) An affected facility equipped with a catalytic combustor shall not discharge into the atmosphere any gases which contain particulate matter in excess of a weighted average of 4.1 g/hr (0.009 lb/hr). Particulate emissions during any test run at any burn rate that is required to be used in the weighted average shall not exceed the value calculated for "C" (rounded to 2 significant figures) calculated using the following equation:

(i) At burn rates less than or equal to 2.82 kg/hr (6.2 lb/hr),

$$C = K_1 BR + K_2$$

Where:

BR = Burn rate in kg/hr (lb/hr)

$K_1 = 3.55 \text{ g/kg (0.00355 lb/lb)}$

$K_2 = 4.98 \text{ g/hr (0.011 lb/hr)}$

(ii) At burn rates greater than 2.82 kg/hr (6.2 lb/hr),  $C = 15 \text{ g/hr (0.033 lb/hr)}$ .

(2) An affected facility not equipped with a catalytic combustor shall not discharge into the atmosphere any gases which contain particulate matter in excess of a weighted average of 7.5 g/hr (0.017 lb/hr). Particulate emissions shall not exceed 15 g/hr (0.033 lb/hr) during any test run at a burn rate less than or equal to 1.5 kg/hr (3.3 lb/hr) that is required to be used in the weighted average and particulate emissions shall not exceed 18 g/hr (0.040 lb/hr) during any test run at a burn rate greater than 1.5 kg/hr (3.3 lb/hr) that is required to be used in the weighted average.

[53 FR 5873, Feb. 26, 1988, as amended at 60 FR 33925, June 29, 1995; 65 FR 61764, Oct. 17, 2000]

### § 60.533 Compliance and certification.

(a) For each model line, compliance with applicable emission limits may be determined based on testing of representative affected facilities within the model line.

(b) Any manufacturer of an affected facility may apply to the Administrator for a certificate of compliance for a model line. The application shall be in writing to: Stationary Source Compliance Division (EN-341), U.S. EPA, 1200 Pennsylvania Ave., NW.,

Washington, DC 20460, Attention: Wood Heater Program. The manufacturer must submit two complete copies of the application and attachments. The application must be signed by the manufacturer, or an authorized representative, and shall contain the following:

(1) The model name and/or design number,

(2) Two color photographs of the tested unit (or, for models being certified under § 60.530(c), photographs of a representative unit), one showing a front view and the other, a side view,

(3)(i) Engineering drawings and specifications of components that may affect emissions (including specifications for each component listed in paragraph (k) of this section). Manufacturers may use complete assembly or design drawings that have been prepared for other purposes, but should designate on the drawings the dimensions of each component listed in paragraph (k) of this section. Manufacturers shall identify tolerances of components of the tested unit listed in paragraph (k)(2) of this section that are different from those specified in that paragraph, and show that such tolerances may not reasonably be anticipated to cause wood heaters in the model line to exceed the applicable emission limits.

(ii) A statement whether the firebox or any firebox component (other than one listed in paragraph (k)(3) of this section) will be composed of different material from the material used for the firebox or firebox component in the wood heater on which certification testing was performed and a description of any such differences.

(iii) For applications to certify a model line of catalytic wood heaters to meet the emission limits in § 60.532(b), a statement describing the manufacturer's program to ensure consistency in the size of any gap in the catalyst bypass mechanism. The statement shall describe, in narrative form, the components of the system that affect the size of the gap, any specifications for critical dimensions of any such components, and the procedure the manufacturer will use to ensure consistency in the size of the catalyst bypass gap.

(4) All documentation pertaining to a valid certification test, including the

**§ 60.533**

**40 CFR Ch. I (7-1-14 Edition)**

complete test report and, for all test runs: Raw data sheets, laboratory technician notes, calculations, and test results. Documentation shall include the items specified in the applicable test methods. Recommended formats and guidance materials are available from the Administrator.

(5) For catalytic wood heaters, a copy of the catalytic combustor warranty,

(6) A statement that the manufacturer will conduct a quality assurance program for the model line which satisfies the requirements of paragraph (o) of this section,

(7) A statement describing how the tested unit was sealed by the laboratory after the completion of certification testing, and

(8) A statement that the manufacturer will notify the accredited laboratory if the application for certification is granted, within thirty days of receipt of notification from EPA.

(9) Statements that the wood heaters manufactured under this certificate will be—

(i) Similar in all material respects to the wood heater submitted for certification testing, and

(ii) Will be labeled as prescribed in § 60.536,

(10) For catalytic wood heaters, a statement that the warranty, access and inspection, and temperature monitoring provisions in paragraphs (c), (d), and (m) of this section will be met,

(11) A statement that the manufacturer will comply with the record-keeping and reporting requirements in § 60.537,

(12) A written estimate of the number of wood heaters that the manufacturer anticipates that he will produce annually for the first two production years. Compliance with this provision may be obtained by designating one of the following ranges:

(i) Less than 2,500,

(ii) 2,500 to 4,999,

(iii) 5,000 to 9,999,

(iv) 10,000 to 49,999, and

(v) 50,000 or greater; and

(13) At the beginning of each test run in a certification test series, two photographs of the fuel load: One before and one after it is placed in the wood heater. One of the photographs shall

show the front view of the wood load and the other shall show the side view.

(14) For manufacturers seeking certification of model lines under § 60.533(e) to meet the emission limits in § 60.532(b), a statement that the manufacturer has entered into a contract with an accredited laboratory which satisfies the requirements of paragraph (g) of this section.

(c) If the affected facility is a catalytic wood heater, the warranty for the catalytic combustor shall include the replacement of the combustor and any prior replacement combustor without charge to the consumer for:

(1) 2 years from the date the consumer purchased the heater for any defects in workmanship or materials that prevent the combustor from functioning when installed and operated properly in the wood heater, and

(2) 3 years from the date the consumer purchased the heater for thermal crumbling or disintegration of the substrate material for heaters manufactured after July 1, 1990.

(d) The manufacturer of an affected facility equipped with a catalytic combustor shall provide for a means to allow the owner to gain access readily to the catalyst for inspection or replacement purposes and shall document in his application for certification how the catalyst is replaced.

(e)(1) The Administrator shall issue a certificate of compliance for a model line if he determines, based on all information submitted by the applicant and any other relevant information available to him, that:

(i) A valid certification test has demonstrated that the wood heater representative of the model line complies with the applicable particulate emission limits in § 60.532,

(ii) Any tolerances or materials for components listed in paragraph (k) (2) or (3) of this section that are different from those specified in those paragraphs may not reasonably be anticipated to cause wood heaters in the model line to exceed the applicable emission limits, and

(iii) The requirements of paragraphs (b), (c), (d), and (m) of this section have been met. The program described under paragraph (b)(3)(iii) of this section

## Environmental Protection Agency

## § 60.533

shall be deemed a tolerance specified in the certified design.

(2) [Reserved]

(3) Upon denying certification under this paragraph, the Administrator shall give written notice to the manufacturer setting forth the basis for his determination.

(f) To be valid, a certification test must be:

(1) Announced to the Administrator in accordance with § 60.534(e),

(2) Conducted by a testing laboratory accredited by the Administrator pursuant to § 60.535,

(3) Conducted on a wood heater similar in all material respects to other wood heaters of the model line that is to be certified, and

(4) Conducted in accordance with the test methods and procedures specified in § 60.534.

(g) To have a wood heater model certified under § 60.533(e) to meet the emission limits in § 60.532(b), a manufacturer must enter into a contract with the accredited laboratory that performed the certification test, under which the laboratory will:

(1) Conduct the random compliance audit test at no cost to the manufacturer if EPA selects that laboratory to conduct the test, or

(2) Pay the manufacturer the reasonable cost of a random compliance audit test (as determined by EPA) if EPA selects any other laboratory to conduct the test.

(h) [Reserved]

(i) An applicant for certification may apply for a waiver of the requirement to submit the results of a certification test pursuant to paragraph (b)(4) of this section, if the wood heaters of the model line are similar in all material respects to another model line that has already been issued a certificate of compliance. A manufacturer that seeks a waiver of certification testing must identify the model line that has been certified, and must submit a copy of an agreement with the owner of the design permitting the applicant to produce wood heaters of that design.

(j)(1) Unless revoked sooner by the Administrator, a certificate of compliance shall be valid:

(i) [Reserved]

(ii) For five years from the date of issuance, for a model line certified as meeting emission limits in § 60.532(b).

(2) Upon application for renewal of certification by the manufacturer, the Administrator may waive the requirement for certification testing upon determining that the model line continues to meet the requirements for certification in paragraph (e) of this section, or that a waiver of certification is otherwise appropriate.

(3) Upon waiving certification testing under paragraph (j)(2) of this section, the Administrator shall give written notice to the manufacturer setting forth the basis for his determination.

(k)(1) A model line must be recertified whenever any change is made in the design submitted pursuant to § 60.533(b)(3) that is presumed to affect the particulate emission rate for that model line. The Administrator may waive this requirement upon written request by the manufacturer, if he determines that the change may not reasonably be anticipated to cause wood heaters in the model line to exceed the applicable emission limits. The granting of such a waiver does not relieve the manufacturer of any compliance obligations under this subpart.

(2) Any change in the indicated tolerances of any of the following components (where such components are applicable) is presumed to affect particulate emissions if that change exceeds  $\pm 0.64$  cm ( $\pm \frac{1}{4}$  inch) for any linear dimension and  $\pm 5$  percent for any cross-sectional area relating to air introduction systems and catalyst bypass gaps unless other dimensions and cross-sectional areas are previously approved by the Administrator under paragraph (e)(1)(ii) of this section:

(i) Firebox: Dimensions,

(ii) Air introduction systems: Cross-sectional area of restrictive air inlets, outlets, and location, and method of control,

(iii) Baffles: Dimensions and locations,

(iv) Refractory/insulation: Dimensions and location,

(v) Catalyst: Dimensions and location,

(vi) Catalyst bypass mechanism and, for model lines certified to meet the emissions limits in § 60.532(b), catalyst

**§ 60.533**

**40 CFR Ch. I (7-1-14 Edition)**

bypass gap tolerances (when bypass mechanism is in closed position): Dimensions, cross-sectional area, and location,

(vii) Flue gas exit: Dimensions and location,

(viii) Door and catalyst bypass gaskets: Dimensions and fit,

(ix) Outer shielding and coverings: Dimensions and location,

(x) Fuel feed system: For wood heaters that are designed primarily to burn wood pellets and other wood heaters equipped with a fuel feed system, the fuel feed rate, auger motor design and power rating, and the angle of the auger to the firebox, and

(xi) Forced air combustion system: For wood heaters so equipped, the location and horsepower of blower motors and the fan blade size.

(3) Any change in the materials used for the following components is presumed to affect emissions:

(i) Refractory/insulation or

(ii) Door and catalyst bypass gaskets.

(4) A change in the make, model, or composition of a catalyst is presumed to affect emissions, unless the change has been approved in advance by the Administrator, based on test data that demonstrate that the replacement catalyst is equivalent to or better than the original catalyst in terms of particulate emission reduction.

(1)(1) The Administrator may revoke certification if he determines that the wood heaters being produced in that model line do not comply with the requirements of this section or §60.532. Such a determination shall be based on all available evidence, including:

(i) Test data from a retesting of the original unit on which the certification test was conducted,

(ii) A finding that the certification test was not valid. The finding must be based on problems or irregularities with the certification test or its documentation, but may be supplemented by other information.

(iii) A finding that the labeling of the wood heater does not comply with the requirements of §60.536,

(iv) Failure by the manufacturer to comply with reporting and record-keeping requirements under §60.537,

(v) Physical examination showing that a significant percentage of produc-

tion units inspected are not similar in all material respects to the representative affected facility submitted for testing, or

(vi) Failure of the manufacturer to conduct a quality assurance program in conformity with paragraph (o) of this section.

(2) Revocation of certification under this paragraph shall not take effect until the manufacturer concerned has been given written notice by the Administrator setting forth the basis for the proposed determination and an opportunity to request a hearing under §60.539.

(3) Determination to revoke certification based upon audit testing shall be made only in accordance with paragraph (p) of this section.

(m) A catalytic wood heater shall be equipped with a permanent provision to accommodate a commercially available temperature sensor which can monitor combustor gas stream temperatures within or immediately downstream [within 2.54 centimeters (1 inch)] of the combustor surface.

(n) Any manufacturer of an affected facility subject under §60.530(b) to the applicable emission limits of this subpart that does not belong to a model line certified under this section shall cause that facility to be tested in an accredited laboratory in accordance with paragraphs (f) (1), (2), and (4) of this section before it leaves the manufacturer's possession and shall report the results to the Administrator.

(o)(1) For each certified model line, the manufacturer shall conduct a quality assurance program which satisfies the following requirements:

(2) Except as provided in paragraph (o)(5) of this section, the manufacturer or his authorized representative shall inspect at least one from every 150 units produced within a model line to determine that the wood heater is within applicable tolerances for all components that affect emissions as listed in paragraph (k)(2) of this section.

(3)(i) Except as provided in paragraph (o)(3)(iii) or (o)(5) of this section, the manufacturer or his authorized representative shall conduct an emission

**Environmental Protection Agency**

**§ 60.533**

test on a randomly selected affected facility produced within a model line certified under § 60.533 (e) or (h), on the following schedule:

If weighted average certification test results were—	If yearly production per model is—	
	<2500	>2500
70% or less of std	When directed by EPA, not to exceed once every 10,000 stoves.	Every 10,000 stoves or triennially (whichever is more frequent).
Within 30% of std	Every 5,000 stoves	Every 5,000 stoves or annually (whichever is more frequent).

(ii) Emission tests shall be conducted in conformity with § 60.534(a), using either approved method for measuring particulate matter (as provided in § 60.534). The manufacturer shall notify EPA by U.S. mail that an emissions test required pursuant to this paragraph will be conducted within one week of the mailing of the notification.

(iii) If the manufacturer stated pursuant to paragraph (b)(3) of this section that the firebox or any firebox component would be composed of a different material than the material used in the wood heater on which certification testing was performed, the first test shall be performed before 1,000 wood heaters are produced. The manufacturer shall submit a report of the results of this emission test to the Administrator within 45 days of the completion of testing.

(4) The manufacturer shall take remedial measures, as appropriate, when inspection or testing pursuant to paragraph (o) of this section indicates that affected facilities within the model line are not within applicable tolerances or do not comply with the applicable emission limit. Manufacturers shall record the problem identified, the extent of the problem, the remedial measures taken, and the effect of such remedial measures as projected by the manufacturer or determined by any additional testing.

(5)(i) If two consecutive passing tests are conducted under either paragraph (o) (2) or (3) of this section, the required frequency of testing under the applicable paragraph shall be modified as follows: Skip every other required test.

(ii) If five consecutive passing tests are conducted under the modified schedule provided for in Paragraph (o)(5)(i) of this section, the required frequency of testing under the applicable paragraph shall be further modified as follows: Skip three consecutive required tests after each required test that is conducted.

(iii) Testing shall resume on the frequency specified in the paragraph (o) (2) or (3), as applicable, if a test failure results during any test conducted under a modified schedule.

(6) If emissions tests under paragraph (o) of this section are conducted at an altitude different from the altitude at which certification tests were conducted, and are not conducted under pressurized conditions, the results shall be adjusted for altitude in accordance with paragraph (h)(3)(iii) of this section.

(p)(1)(i) The Administrator shall after July 1, 1990, select for random compliance audit testing certified wood heater model lines that have not already been subject to a random compliance audit under this paragraph. The Administrator shall not select more than one model line under this program for every five model lines for which certification is granted under § 60.533(e) to meet the emission limits in § 60.532(b). No accredited laboratory shall test or bear the expense of testing, as provided in the contract described in paragraph (g) of this section, more than one model line from every five model lines tested by the laboratory for which certification was granted. The Administrator shall use a procedure that ensures that the selection process is random.

(ii) The Administrator may, by means of a neutral selection scheme, select model lines certified under § 60.533(e) or § 60.533(h) for selective enforcement audit testing under this paragraph. Prior to July 1, 1990, the Administrator shall only select a model line for a selective enforcement audit on the basis of information indicating that affected facilities within the model line may exceed the applicable emission limit in § 60.532.

(2) The Administrator shall randomly select for audit testing five production

**§ 60.533**

**40 CFR Ch. I (7-1-14 Edition)**

wood heaters from each model line selected under paragraph (p)(1) of this section. These wood heaters shall be selected from completed units ready for shipment from the manufacturer's facility (whether or not the units are in a package or container). The wood heaters shall be sealed upon selection and remain sealed until they are tested or until the audit is completed. The wood heaters shall be numbered in the order that they were selected.

(3)(i) The Administrator shall test, or direct the manufacturer to test, the first of the five wood heaters selected under paragraph (p)(2) of this section in a laboratory accredited under § 60.535 that is selected pursuant to paragraph (p)(4) of this section.

(ii) The expense of the random compliance audit test shall be the responsibility of the wood heater manufacturer. A manufacturer may require the laboratory that performed the certification test to bear the expense of a random compliance audit test by means of the contract required under paragraph (g) of this section. If the laboratory with which the manufacturer had a contract has ceased business due to bankruptcy or is otherwise legally unable to honor the contract, the Administrator will not select any of that manufacturer's model lines for which certification testing has been conducted by that laboratory for a random compliance audit test.

(iii) The test shall be conducted using the same test method and procedure used to obtain certification. If the certification test consisted of more than one particulate sampling test method, the Administrator may use either one of these methods for the purpose of audit testing. If the test is performed in a pressure vessel, air pressure in the pressure vessel shall be maintained within 1 percent of the average of the barometric pressures recorded for each individual test run used to calculate the weighted average emission rate for the certification test. The Administrator shall notify the manufacturer at least one week prior to any test under this paragraph, and allow the manufacturer and/or his authorized representatives to observe the test.

(4)(i) Except as provided in this paragraph, the Administrator may select

any accredited laboratory for audit testing.

(ii)(A) The Administrator shall select the accredited laboratory that performed the test used to obtain certification for audit testing, until the Administrator has amended this subpart, based upon a determination pursuant to paragraph (p)(4)(ii)(B) of this section, to allow testing at another laboratory. If another laboratory is selected pursuant to this paragraph, and the overall precision of the test method and procedure is greater than  $\pm 1$  gram per hour ( $\pm 0.0022$  lb per hour) of the weighted average at laboratories below 304 meters (1,000 feet) elevation (or equivalent), the interlaboratory component of the precision shall be added to the applicable emissions standard for the purposes of this paragraph.

(B) [Reserved]

(iii) The Administrator shall not select an accredited laboratory that is located at an elevation more than 152 meters (500 feet) higher than the elevation of the laboratory which performed the test used to obtain certification, unless the audit test is performed in a pressure vessel.

(5)(i) If emissions from a wood heater tested under paragraph (p)(3) of this section exceed the applicable weighted average emission limit by more than 50 percent, the Administrator shall so notify the manufacturer that certification for that model line is suspended effective 72 hours from the receipt of the notice, unless the suspension notice is withdrawn by the Administrator. The suspension shall remain in effect until withdrawn by the Administrator, or 30 days from its effective date (if a revocation notice under paragraph (p)(5)(ii) of this section is not issued within that period), or the date of final agency action on revocation, whichever occurs earlier.

(ii)(A) If emissions from a wood heater tested under paragraph (p)(3) of this section exceed the applicable weighted average emission limit, the Administrator shall notify the manufacturer that certification is revoked for that model line.

(B) A revocation notice under paragraph (p)(5)(ii)(A) shall become final and effective 60 days after receipt by

## Environmental Protection Agency

## § 60.534

the manufacturer, unless it is withdrawn, a hearing is requested under § 60.539, or the deadline for requesting a hearing is extended.

(C) The Administrator may extend the deadline for requesting a hearing for up to 60 days for good cause.

(D) A manufacturer may extend the deadline for requesting a hearing for up to six months, by agreeing to a voluntary suspension of certification.

(iii) Any notification under paragraph (p)(5)(i) or (p)(5)(ii) of this section shall include a copy of a preliminary test report from the accredited laboratory. The accredited laboratory shall provide a preliminary test report to the Administrator within 10 days of the completion of testing, if a wood heater exceeds the applicable emission limit in § 60.532. The laboratory shall provide the Administrator and the manufacturer, within 30 days of the completion of testing, all documentation pertaining to the test, including the complete test report and raw data sheets, laboratory technician notes, and test results for all test runs.

(iv) Upon receiving notification of a test failure under paragraph (p)(5)(ii) of this section, the manufacturer may submit some or all of the remaining four wood heaters selected under paragraph (p)(2) of this section for testing at his own expense, in the order they were selected by the Administrator, at the laboratory that performed the emissions test for the Administrator.

(v) Whether or not the manufacturer proceeds under paragraph (p)(5)(iv) of this section, the manufacturer may submit any relevant information to the Administrator, including any other test data generated pursuant to this subpart. The manufacturer shall pay the expense of any testing performed for him.

(vi) The Administrator shall withdraw any notice issued under paragraph (p)(5)(ii) of this section if tests under paragraph (p)(5)(iv) of this section show either—

(A) That all four wood heaters tested for the manufacturer met the applicable weighted average emission limits, or

(B) That the second and third wood heaters selected met the applicable weighted average emission limits and

the average of all three weighted averages (including the original audit test) was below the applicable weighted average emission limits.

(vii) The Administrator may withdraw any proposed revocation, if the Administrator finds that an audit test failure has been rebutted by information submitted by the manufacturer under paragraph (p)(5)(iv) of this section and/or (p)(5)(v) of this section or by any other relevant information available to him.

(viii) Any withdrawal of a proposed revocation shall be accompanied by a document setting forth its basis.

[53 FR 5874, Feb. 26, 1988; 53 FR 14889, Apr. 26, 1988, as amended at 60 FR 33925, June 29, 1995; 63 FR 64874, Nov. 24, 1998; 65 FR 61764, Oct. 17, 2000]

### § 60.534 Test methods and procedures.

Test methods and procedures in appendix A of this part, except as provided under § 60.8(b), shall be used to determine compliance with the standards and requirements for certification under §§ 60.532 and 60.533 as follows:

(a) Method 28 shall be used to establish the certification test conditions and the particulate matter weighted emission values.

(b) Emission concentrations may be measured with either:

(1) Method 5G, if a dilution tunnel sampling location is used, or

(2) Method 5H, if a stack location is used.

(c) Method 28A shall be used to determine that a wood combustion unit qualifies under the definition of wood heater in § 60.531(a). If such a determination is necessary, this test shall be conducted by an accredited laboratory.

(d) Appendix J is used as an optional procedure in establishing the overall thermal efficiency of wood heaters. (To be proposed separately.)

(e)(1) The manufacturer of an affected facility shall notify the Administrator of the date that certification testing is scheduled to begin. (A notice from the testing lab containing the information required in § 60.533(f)(1) may be used to satisfy this requirement.) This notice shall be at least 30 days before the start of testing. The notification of testing shall be in writing, and