

**§ 60.54**

**§ 60.54 Test methods and procedures.**

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standard in § 60.52 as follows:

(1) The concentration ( $c_{12}$ ) of particulate matter, corrected to 12 percent  $CO_2$ , shall be computed for each run using the following equation:

$$c_{12} = c_s (12/\%CO_2)$$

where:

$c_{12}$ =concentration of particulate matter, corrected to 12 percent  $CO_2$ , g/dscm (gr/dscf).

$c_s$ =concentration of particulate matter, g/dscm (gr/dscf).

$\%CO_2$ = $CO_2$  concentration, percent dry basis.

(2) Method 5 shall be used to determine the particulate matter concentration ( $c_s$ ). The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine  $CO_2$  concentration ( $\%CO_2$ ).

(i) The  $CO_2$  sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the  $CO_2$  traverse points may be reduced to 12 if Method 1 is used to locate the 12  $CO_2$  traverse points. If individual  $CO_2$  samples are taken at each traverse point, the  $CO_2$  concentration ( $\%CO_2$ ) used in the correction equation shall be the arithmetic mean of the sample  $CO_2$  concentrations at all traverse points.

(ii) If sampling is conducted after a wet scrubber, an "adjusted"  $CO_2$  concentration [ $(\%CO_2)_{adj}$ ], which accounts for the effects of  $CO_2$  absorption and dilution air, may be used instead of the  $CO_2$  concentration determined in this paragraph. The adjusted  $CO_2$  concentration shall be determined by either of the procedures in paragraph (c) of this section.

(c) The owner or operator may use either of the following procedures to de-

termine the adjusted  $CO_2$  concentration.

(1) The volumetric flow rates at the inlet and outlet of the wet scrubber and the inlet  $CO_2$  concentration may be used to determine the adjusted  $CO_2$  concentration [ $(\%CO_2)_{adj}$ ] using the following equation:

$$(\%CO_2)_{adj} = (\%CO_2)_{di} (Q_{di}/Q_{do})$$

where:

$(\%CO_2)_{adj}$ =adjusted outlet  $CO_2$  concentration, percent dry basis.

$(\%CO_2)_{di}$ = $CO_2$  concentration measured before the scrubber, percent dry basis.

$Q_{di}$ =volumetric flow rate of effluent gas before the wet scrubber, dscm/min (dscf/min).

$Q_{do}$ =volumetric flow rate of effluent gas after the wet scrubber, dscm/min (dscf/min).

(i) At the outlet, Method 5 is used to determine the volumetric flow rate ( $Q_{do}$ ) of the effluent gas.

(ii) At the inlet, Method 2 is used to determine the volumetric flow rate ( $Q_{di}$ ) of the effluent gas as follows: Two full velocity traverses are conducted, one immediately before and one immediately after each particulate run conducted at the outlet, and the results are averaged.

(iii) At the inlet, the emission rate correction factor, integrated sampling and analysis procedure of Method 3B is used to determine the  $CO_2$  concentration [ $(\%CO_2)_{di}$ ] as follows: At least nine sampling points are selected randomly from the velocity traverse points and are divided randomly into three sets, equal in number of points; the first set of three or more points is used for the first run, the second set for the second run, and the third set for the third run. The  $CO_2$  sample is taken simultaneously with each particulate run being conducted at the outlet, by traversing the three sampling points (or more) and sampling at each point for equal increments of time.

(2) Excess air measurements may be used to determine the adjusted  $CO_2$  concentration [ $(\%CO_2)_{adj}$ ] using the following equation:

$$(\%CO_2)_{adj} = (\%CO_2)_{di} \frac{[(100 + \%EA_i)]}{(100 + \%EA_o)}$$

where:

$(\%CO_2)_{adj}$ =adjusted outlet  $CO_2$  concentration, percent dry basis.

$(\%CO_2)_{di}$ = $CO_2$  concentration at the inlet of the wet scrubber, percent dry basis.

## Environmental Protection Agency

## § 60.50a

%EA<sub>i</sub>=excess air at the inlet of the scrubber, percent.

%EA<sub>o</sub>=excess air at the outlet of the scrubber, percent.

(i) A gas sample is collected as in paragraph (c)(1)(iii) of this section and the gas samples at both the inlet and outlet locations are analyzed for CO<sub>2</sub>, O<sub>2</sub>, and N<sub>2</sub>.

(ii) Equation 3B-3 of Method 3B is used to compute the percentages of excess air at the inlet and outlet of the wet scrubber.

[54 FR 6665, Feb. 14, 1989, as amended at 55 FR 5212, Feb. 14, 1990; 65 FR 61753, Oct. 17, 2000]

### **Subpart Ea—Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994**

SOURCE: 56 FR 5507, Feb. 11, 1991, unless otherwise noted.

#### **§ 60.50a Applicability and delegation of authority.**

(a) The affected facility to which this subpart applies is each municipal waste combustor unit with a municipal waste combustor unit capacity greater than 225 megagrams per day (250 tons per day) of municipal solid waste for which construction, modification, or reconstruction is commenced as specified in paragraphs (a)(1) and (a)(2) of this section.

(1) Construction is commenced after December 20, 1989 and on or before September 20, 1994.

(2) Modification or reconstruction is commenced after December 20, 1989 and on or before June 19, 1996.

(b) [Reserved]

(c) Any unit combusting a single-item waste stream of tires is not subject to this subpart if the owner or operator of the unit:

(1) Notifies the Administrator of an exemption claim; and

(2) Provides data documenting that the unit qualifies for this exemption.

(d) Any cofired combustor, as defined under § 60.51a, located at a plant that meets the capacity specifications in paragraph (a) of this section is not sub-

ject to this subpart if the owner or operator of the cofired combustor:

(1) Notifies the Administrator of an exemption claim;

(2) Provides a copy of the federally enforceable permit (specified in the definition of cofired combustor in this section); and

(3) Keeps a record on a calendar quarter basis of the weight of municipal solid waste combusted at the cofired combustor and the weight of all other fuels combusted at the cofired combustor.

(e) Any cofired combustor that is subject to a federally enforceable permit limiting the operation of the combustor to no more than 225 megagrams per day (250 tons per day) of municipal solid waste is not subject to this subpart.

(f) Physical or operational changes made to an existing municipal waste combustor unit primarily for the purpose of complying with emission guidelines under subpart Cb are not considered a modification or reconstruction and do not result in an existing municipal waste combustor unit becoming subject to this subpart.

(g) A qualifying small power production facility, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)), that burns homogeneous waste (such as automotive tires or used oil, but not including refuse-derived fuel) for the production of electric energy is not subject to this subpart if the owner or operator of the facility notifies the Administrator of an exemption claim and provides data documenting that the facility qualifies for this exemption.

(h) A qualifying cogeneration facility, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), that burns homogeneous waste (such as automotive tires or used oil, but not including refuse-derived fuel) for the production of electric energy and steam or forms of useful energy (such as heat) that are used for industrial, commercial, heating, or cooling purposes, is not subject to this subpart if the owner or operator of the facility notifies the Administrator of an exemption claim and provides data documenting that the facility qualifies for this exemption.