ram at the other end. When the ram extends, the grate tile rotates around the hinged end. Twenty-four hour daily average or 24-hour daily average means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 midnight and the following midnight.

Untreated lumber means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or “pressure-treated.” Pressure-treating compounds include, but are not limited to, chromate copper arsenate, pentachlorophenol, and creosote.

Waterwall furnace means a combustion unit having energy (heat) recovery in the furnace (i.e., radiant heat transfer section) of the combustor.

Yard waste means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs that are generated by residential, commercial/retail, institutional, and/or industrial sources as part of maintenance activities associated with yards or other private or public lands. Yard waste does not include construction, renovation, and demolition wastes, which are exempt from the definition of municipal solid waste in this section. Yard waste does not include clean wood, which is exempt from the definition of municipal solid waste in this section.

§ 60.52b Standards for municipal waste combustor metals, acid gases, organics, and nitrogen oxides.

(a) The limits for municipal waste combustor metals are specified in paragraphs (a)(1) through (a)(5) of this section.

(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the limits specified in paragraph (a)(1)(i) or (a)(1)(ii) of this section.

(i) For affected facilities that commenced construction, modification, or reconstruction after September 20, 1994, and on or before December 19, 2005, the emission limit is 24 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

(ii) For affected facilities that commenced construction, modification, or reconstruction after December 19, 2005, the emission limit is 20 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

(2) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 10 percent opacity (6-minute average).

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain cadmium in excess of the limits specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section.

(i) For affected facilities that commenced construction, modification, or reconstruction after September 20, 1994, and on or before December 19, 2005, the emission limit is 20 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

(ii) For affected facilities that commenced construction, modification, or reconstruction after December 19, 2005, the emission limit is 10 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain sulfur oxides in excess of the limits specified in paragraph (a)(4)(i) or (a)(4)(ii) of this section.

(i) For affected facilities that commenced construction, modification, or reconstruction after September 20, 1994, and on or before December 19, 2005, the emission limit is 140 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

(ii) For affected facilities that commenced construction, modification, or reconstruction after December 19, 2005, the emission limit is 70 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
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the atmosphere from the affected facility any gases that contain lead in excess of the limits specified in paragraph (a)(4)(i) or (a)(4)(ii) of this section.

(i) For affected facilities that commenced construction, modification, or reconstruction after September 20, 1994, and on or before December 19, 2005, the emission limit is 200 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

(ii) For affected facilities that commenced construction, modification, or reconstruction after December 19, 2005, the emission limit is 140 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain mercury in excess of the limits specified in paragraph (a)(5)(i) or (a)(5)(ii) of this section.

(i) For affected facilities that commenced construction, modification, or reconstruction after September 20, 1994 and on or before December 19, 2005, the emission limit is 80 micrograms per dry standard cubic meter or 15 percent of the potential mercury emission concentration (85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.

(ii) For affected facilities that commenced construction, modification, or reconstruction after December 19, 2005, the emission limit is 50 micrograms per dry standard cubic meter, or 15 percent of the potential mercury emission concentration (85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.

(b) The limits for municipal waste combustor acid gases are specified in paragraphs (b)(1) and (b)(2) of this section.

(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain sulfur dioxide in excess of 30 parts per million by volume or 20 percent of the potential sulfur dioxide emission concentration (80-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. The averaging time is specified under §60.58b(e).

(2) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain hydrogen chloride in excess of 25 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent.

(c) The limits for municipal waste combustor organics are specified in paragraphs (c)(1) and (c)(2) of this section.

(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility for which construction, modification or reconstruction commences on or before November 20, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan emissions that exceed 30 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for the first 3 years following the date of initial startup. After the first 3 years following the date of initial startup, no owner or operator shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan total mass emissions that exceed 13 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen.

(2) On and after the date on which the initial performance test is completed or is required to be completed under §60.8 of subpart A of this part, no owner or operator of an affected facility for which construction, modification, or reconstruction commences...
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after November 20, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan total mass emissions that exceed 13 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen.

(d) The limits for nitrogen oxides are specified in paragraphs (d)(1) and (d)(2) of this section.

(1) During the first year of operation after the date on which the initial performance test is completed or is required to be completed under § 60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 180 parts per million by volume, corrected to 7 percent oxygen (dry basis). The averaging time is specified under § 60.58b(h).

(2) After the first year of operation following the date on which the initial performance test is completed or is required to be completed under § 60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 150 parts per million by volume, corrected to 7 percent oxygen (dry basis). The averaging time is specified under § 60.58b(h).

§ 60.53b Standards for municipal waste combustor operating practices.

(a) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of subpart A of this part, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain carbon monoxide in excess of the emission limits specified in table 1 of this subpart.

(b) No owner or operator of an affected facility shall cause such facility to operate at a load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load as defined in § 60.51b, except as specified in paragraphs (b)(1) and (b)(2) of this section. The averaging time is specified under § 60.58b(1).

(1) During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no municipal waste combustor unit load limit is applicable if the provisions of paragraph (b)(2) of this section are met.

(2) The municipal waste combustor unit load limit may be waived in writing by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility operations.

TABLE 1—Municipal Waste Combustor Operating Standards

<table>
<thead>
<tr>
<th>Municipal waste combustor technology</th>
<th>Carbon monoxide emission limit (parts per million by volume)</th>
<th>Averaging time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass burn waterwall</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Mass burn refractory</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Mass burn rotary waterwall</td>
<td>100</td>
<td>24</td>
</tr>
<tr>
<td>Modular staved air</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Modular excess air</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Refuse-derived fuel stoker</td>
<td>150</td>
<td>24</td>
</tr>
<tr>
<td>Bubbling fluidized bed combustor</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Circulating fluidized bed combustor</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Pulverized coal/refuse-derived fuel mixed fuel-fired combustor</td>
<td>150</td>
<td>4</td>
</tr>
<tr>
<td>Spreader stoker coal/refuse-derived fuel mixed fuel-fired combustor</td>
<td>150</td>
<td>24</td>
</tr>
</tbody>
</table>

* Measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7 percent oxygen (dry basis). The averaging times are specified in greater detail in § 60.58b(h).

* Averaging times are 4-hour or 24-hour block averages.