

Table 4 of § 63.1215: 1-Hour Average HCl-Equivalent Emission Rate Limits (lb/hr)—Simple Elevated Terrain

Distance to property boundary (m)

| Stack Diameter (m) | Distance to property boundary (m) | | | | | | | | | | | |
|-------------------------------|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 30 | 50 | 70 | 100 | 200 | 300 | 500 | 700 | 1000 | 2000 | 3000 | 5000 |
| Stack Diameter = 0.3 m | | | | | | | | | | | | |
| 5 | 1.4E+00 | 1.9E+00 | 2.6E+00 | 3.8E+00 | 6.9E+00 | 9.4E+00 | 1.5E+01 | 2.1E+01 | 3.9E+01 | 8.1E+01 | 1.4E+02 | 2.7E+02 |
| 10 | 4.0E+00 | 4.0E+00 | 4.6E+00 | 6.4E+00 | 6.9E+00 | 9.4E+00 | 1.5E+01 | 2.1E+01 | 3.9E+01 | 8.1E+01 | 1.4E+02 | 2.7E+02 |
| 20 | 1.1E+01 | 1.1E+01 | 1.1E+01 | 1.1E+01 | 1.2E+01 | 1.5E+01 | 2.4E+01 | 3.5E+01 | 5.4E+01 | 1.3E+02 | 2.1E+02 | 4.0E+02 |
| 30 | 2.9E+01 | 2.9E+01 | 2.9E+01 | 3.3E+01 | 3.3E+01 | 3.3E+01 | 4.4E+01 | 7.3E+01 | 1.9E+02 | 2.7E+02 | 5.2E+02 | 9.0E+02 |
| 50 | 7.3E+01 | 7.3E+01 | 7.3E+01 | 7.3E+01 | 7.3E+01 | 7.3E+01 | 9.0E+01 | 9.0E+01 | 9.0E+01 | 2.1E+02 | 3.5E+02 | 6.8E+02 |
| Stack Diameter = 0.5 m | | | | | | | | | | | | |
| 5 | 1.9E+00 | 2.7E+00 | 3.7E+00 | 5.9E+00 | 1.4E+01 | 1.7E+01 | 2.4E+01 | 3.5E+01 | 5.4E+01 | 1.0E+02 | 1.6E+02 | 3.0E+02 |
| 10 | 5.9E+00 | 5.9E+00 | 6.4E+00 | 8.9E+00 | 1.4E+01 | 1.7E+01 | 2.4E+01 | 3.5E+01 | 5.4E+01 | 1.0E+02 | 1.6E+02 | 3.0E+02 |
| 20 | 1.6E+01 | 1.6E+01 | 1.6E+01 | 1.6E+01 | 1.6E+01 | 1.6E+01 | 2.4E+01 | 3.5E+01 | 5.4E+01 | 1.3E+02 | 2.1E+02 | 4.0E+02 |
| 30 | 2.7E+01 | 2.7E+01 | 2.7E+01 | 2.7E+01 | 2.7E+01 | 3.3E+01 | 4.4E+01 | 5.4E+01 | 8.5E+01 | 1.8E+02 | 2.9E+02 | 5.5E+02 |
| 50 | 7.6E+01 | 7.6E+01 | 7.6E+01 | 7.6E+01 | 7.6E+01 | 8.3E+01 | 1.1E+02 | 1.3E+02 | 2.4E+02 | 3.9E+02 | 7.2E+02 | 1.4E+03 |
| Stack Diameter = 1.0 m | | | | | | | | | | | | |
| 10 | 1.0E+01 | 1.0E+01 | 1.2E+01 | 1.7E+01 | 3.9E+01 | 3.9E+01 | 4.5E+01 | 5.6E+01 | 7.9E+01 | 1.0E+02 | 2.4E+02 | 4.4E+02 |
| 20 | 2.9E+01 | 2.9E+01 | 2.9E+01 | 3.9E+01 | 3.9E+01 | 3.9E+01 | 4.5E+01 | 5.6E+01 | 7.9E+01 | 1.0E+02 | 2.4E+02 | 4.4E+02 |
| 30 | 4.2E+01 | 4.2E+01 | 4.2E+01 | 4.2E+01 | 4.2E+01 | 4.2E+01 | 4.5E+01 | 5.6E+01 | 7.9E+01 | 1.0E+02 | 2.4E+02 | 4.4E+02 |
| 50 | 8.9E+01 | 8.9E+01 | 8.9E+01 | 8.9E+01 | 8.9E+01 | 8.9E+01 | 1.1E+02 | 1.4E+02 | 1.7E+02 | 3.3E+02 | 5.0E+02 | 8.7E+02 |
| 70 | 3.8E+02 | 3.8E+02 | 3.8E+02 | 3.8E+02 | 3.8E+02 | 3.8E+02 | 4.0E+02 | 4.1E+02 | 4.3E+02 | 6.1E+02 | 1.0E+03 | 1.6E+03 |
| Stack Diameter = 1.5 m | | | | | | | | | | | | |
| 10 | 2.1E+01 | 2.1E+01 | 2.5E+01 | 3.6E+01 | 5.4E+01 | 6.3E+01 | 6.3E+01 | 6.9E+01 | 9.8E+01 | 2.0E+02 | 3.2E+02 | 5.7E+02 |
| 20 | 3.3E+01 | 3.3E+01 | 3.3E+01 | 3.7E+01 | 5.4E+01 | 6.3E+01 | 6.3E+01 | 6.9E+01 | 9.8E+01 | 2.0E+02 | 3.2E+02 | 5.7E+02 |
| 30 | 6.3E+01 | 6.3E+01 | 6.3E+01 | 6.3E+01 | 6.3E+01 | 6.3E+01 | 6.3E+01 | 6.9E+01 | 9.8E+01 | 2.0E+02 | 3.2E+02 | 5.7E+02 |
| 50 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.2E+02 | 1.4E+02 | 1.7E+02 | 3.2E+02 | 5.0E+02 | 8.7E+02 |
| 70 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 4.9E+02 | 8.5E+02 | 1.3E+03 | 2.0E+03 |
| Stack Diameter = 2.0 m | | | | | | | | | | | | |
| 10 | 2.7E+01 | 2.7E+01 | 3.2E+01 | 4.4E+01 | 6.9E+01 | 6.9E+01 | 7.9E+01 | 1.1E+02 | 1.5E+02 | 2.8E+02 | 3.9E+02 | 6.6E+02 |
| 20 | 4.0E+01 | 4.0E+01 | 4.0E+01 | 4.4E+01 | 6.9E+01 | 6.9E+01 | 7.9E+01 | 1.1E+02 | 1.5E+02 | 2.8E+02 | 3.9E+02 | 6.6E+02 |
| 30 | 7.9E+01 | 7.9E+01 | 7.9E+01 | 7.9E+01 | 7.9E+01 | 7.9E+01 | 7.9E+01 | 9.7E+01 | 1.5E+02 | 2.6E+02 | 3.9E+02 | 6.6E+02 |
| 50 | 1.3E+02 | 1.3E+02 | 1.3E+02 | 1.3E+02 | 1.3E+02 | 1.3E+02 | 1.3E+02 | 1.4E+02 | 1.7E+02 | 3.3E+02 | 5.0E+02 | 8.7E+02 |
| 70 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 5.8E+02 | 8.6E+02 | 1.2E+03 | 1.5E+03 |
| 100 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 8.6E+02 | 1.2E+03 | 1.5E+03 | 1.7E+03 |
| Stack Diameter = 3.0 m | | | | | | | | | | | | |
| 10 | 3.9E+01 | 3.5E+01 | 4.1E+01 | 5.9E+01 | 1.2E+02 | 1.6E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 3.5E+02 | 5.2E+02 | 9.0E+02 |
| 20 | 6.2E+01 | 6.2E+01 | 6.2E+01 | 7.2E+01 | 1.2E+02 | 1.2E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 3.5E+02 | 5.2E+02 | 9.0E+02 |
| 30 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.0E+02 | 1.2E+02 | 1.2E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 3.5E+02 | 5.2E+02 | 9.0E+02 |
| 50 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 1.8E+02 | 3.5E+02 | 5.2E+02 | 9.0E+02 |
| 70 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 7.9E+02 | 8.9E+02 | 1.3E+03 | 2.0E+03 |
| 100 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 1.4E+03 | 2.0E+03 | 2.9E+03 |
| Stack Diameter = 4.0 m | | | | | | | | | | | | |
| 10 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 1.2E+02 | 2.2E+02 | 4.2E+02 | 1.0E+03 |
| 30 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 | 2.2E+02 |
| 50 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.1E+03 | 1.1E+03 | 1.6E+03 |
| 70 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.0E+03 | 1.6E+03 |
| 100 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 1.6E+03 | 2.3E+03 |

[70 FR 59565, Oct. 12, 2005, as amended at 73 FR 18982, Apr. 8, 2008]

EMISSIONS STANDARDS AND OPERATING LIMITS FOR SOLID FUEL BOILERS, LIQUID FUEL BOILERS, AND HYDROCHLORIC ACID PRODUCTION FURNACES

§ 63.1216 What are the standards for solid fuel boilers that burn hazardous waste?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emis-

sions in excess of the limits provided by paragraph (a)(5) of this section;

(2) Mercury in excess of 11 µgm/dscm corrected to 7 percent oxygen;

(3) For cadmium and lead combined, except for an area source as defined under § 63.2, emissions in excess of 180 µgm/dscm, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium combined, except for an area source as defined under § 63.2, emissions in excess of 380 µgm/dscm, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine combined, except for an area source as defined under § 63.2, emissions in excess of 440 parts per million by volume, expressed as a chloride (Cl^-) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, except for an area source as defined under § 63.2 or as provided by paragraph (e) of this section, emissions in excess of 68 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (b)(5) of this section;

(2) Mercury in excess of 11 $\mu\text{gm/dscm}$ corrected to 7 percent oxygen;

(3) For cadmium and lead combined, except for an area source as defined under § 63.2, emissions in excess of 180 $\mu\text{gm/dscm}$, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium combined, except for an area source as defined under § 63.2, emissions

in excess of 190 $\mu\text{gm/dscm}$, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine combined, except for an area source as defined under § 63.2, emissions in excess of 73 parts per million by volume, expressed as a chloride (Cl^-) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, except for an area source as defined under § 63.2 or as provided by paragraph (e) of this section, emissions in excess of 34 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard*—(1) 99.99% DRE. Except as provided in paragraph (c)(2) of this section, you must achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$\text{DRE} = [1 - (W_{\text{out}} + W_{\text{in}})] \times 100\%$$

Where:

W_{in} = mass feedrate of one POHC in a waste feedstream; and

W_{out} = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-*p*-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the POHCs in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Alternative to the particulate matter standard—(1) General.* In lieu of complying with the particulate matter standards of this section, you may elect to comply with the following alternative metal emission control requirement:

(2) *Alternative metal emission control requirements for existing solid fuel boilers.* (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 180 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 380 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(3) *Alternative metal emission control requirements for new solid fuel boilers.* (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 180 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 190 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(4) *Operating limits.* Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (e)(2) and (e)(3) of this section pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

(f) *Elective standards for area sources.* Area sources as defined under §63.2 are subject to the standards for cadmium and lead, the standards for arsenic, beryllium, and chromium, the standards for hydrogen chloride and chlorine, and the standards for particulate matter under this section if they elect under §266.100(b)(3) of this chapter to comply with those standards in lieu of the standards under 40 CFR 266.105, 266.106, and 266.107 to control those pollutants.

[70 FR 59565, Oct. 12, 2005]

§63.1217 What are the standards for liquid fuel boilers that burn hazardous waste?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1)(i) Dioxins and furans in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for liquid fuel boilers