

to document and maintain compliance with the applicable regulations, including data and information, reports, notifications, and communications with regulatory officials.

Operating requirements means operating terms or conditions, limits, or operating parameter limits developed under this subpart that ensure compliance with the emission standards.

Preheater tower combustion gas monitoring location means a location within the preheater tower of a dry process cement kiln downstream (in terms of gas flow) of all hazardous waste firing locations and where a representative sample of combustion gas to measure combustion efficiency can be monitored.

Raw material feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to a cement or lightweight aggregate kiln. Raw material feed does not include the fuels used in the kiln to produce heat to form the clinker product.

Research, development, and demonstration source means a source engaged in laboratory, pilot plant, or prototype demonstration operations:

- (1) Whose primary purpose is to conduct research, development, or short-term demonstration of an innovative and experimental hazardous waste treatment technology or process; and
- (2) Where the operations are under the close supervision of technically-trained personnel.

Rolling average means the average of all one-minute averages over the averaging period.

Run means the net period of time during which an air emission sample is collected under a given set of operating conditions. Three or more runs constitutes a test. Unless otherwise specified, a run may be either intermittent or continuous.

Run average means the average of the one-minute average parameter values for a run.

TEQ means toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.

You means the owner or operator of a hazardous waste combustor.

(b) The acronyms used in this subpart refer to the following:

AWFCO means automatic waste feed cutoff.

CAS means chemical abstract services registry.

CEMS means continuous emissions monitoring system.

CMS means continuous monitoring system.

DRE means destruction and removal efficiency.

MACT means maximum achievable control technology.

MTEC means maximum theoretical emissions concentration.

NIC means notification of intent to comply.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42297, July 10, 2000; 65 FR 67271, Nov. 9, 2000; 66 FR 35103, July 3, 2001; 67 FR 6986, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002]

§ 63.1202 [Reserved]

EMISSIONS STANDARDS AND OPERATING LIMITS

§ 63.1203 What are the standards for hazardous waste incinerators?

(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:
 - (i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or
 - (ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400 °F or lower requirement);
- (2) Mercury in excess of 130 µg/dscm corrected to 7 percent oxygen;
- (3) Lead and cadmium in excess of 240 µg/dscm, combined emissions, corrected to 7 percent oxygen;
- (4) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, 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) Hydrochloric acid and chlorine gas in excess of 77 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 34 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) Dioxins and furans in excess of 0.20 ng TEQ/dscm, corrected to 7 percent oxygen;

(2) Mercury in excess of 45 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 120 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, 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) Hydrochloric acid and chlorine gas in excess of 21 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter 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 destruction and removal efficiency (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:

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

Where:

W_{in} = mass feedrate of one principal organic hazardous constituent (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 destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (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 Principal Organic Hazardous Constituents (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 from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60, for each waste to be burned. You must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of 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.

[67 FR 6809, Feb. 13, 2002]

§ 63.1204 What are the standards for hazardous waste burning cement kilns?

(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:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 120 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 330 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 56 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons*.

(i) For kilns equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Carbon monoxide in the by-pass duct or mid-kiln gas sampling system 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)(i)(B) 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 in the by-pass duct or mid-kiln gas sampling system 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

(B) Hydrocarbons in the by-pass duct or midkiln gas sampling system 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;

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Hydrocarbons in the main stack in excess of 20 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; or

(B) Carbon monoxide in the main stack in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a