

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 264, 265, and 266

[EPA/OSW-FR-92-SWH-FRL-4198-5]

Burning of Hazardous Waste in Boilers and Industrial Furnaces

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; technical clarification amendments and corrections.

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**SUMMARY:** This action makes several technical clarification amendments and corrections to the final rule for boilers and industrial furnaces burning hazardous waste. The final rule was published on February 21, 1991 (56 FR 7134). These revisions provide clarification and correct unintended consequences of the rule.

**EFFECTIVE DATE:** August 11, 1992.

**ADDRESSES:** The documents are available for viewing at the RCRA Information Center (docket identification number F-92-BBC3-FFFFF), located at: EPA/RCRA Information Center, room M2427, 401 M Street, SW., Washington, DC 20460.

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**FOR FURTHER INFORMATION CONTACT:** For general information, contact the RCRA Hotline at: (800) 424-9346 (toll free) or (703) 920-9810.

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>>>> Preamble has not been included in this file. <<<<

For the reasons set out in the preamble, 40 CFR parts 260, 261, 264, 265, and 266 are amended as follows:

**PART 260-HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL**

I. In part 260:

1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921-6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

2. In § 260.10, the definitions for "Infrared incinerator" and "Plasma arc incinerator" are revised to read as follows:

§ 260.10 Definitions.

\* \* \* \* \*

``Infrared incinerator" means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

\* \* \* \* \*

``Plasma arc incinerator" means any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

\* \* \* \* \*

3. In § 260.20, the first sentence of paragraph (a) is revised to read as follows:

§ 260.20 General.

(a) Any person may petition the Administrator to modify or revoke any provision in parts 260 through 266 and 268 of this chapter. \* \* \*

\* \* \* \* \*

PART 261-IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

II. In part 261:

1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

2. Section 261.2 is amended by revising paragraph (e)(2)(iv) to read as follows:

§ 261.2 Definition of solid waste.

\* \* \* \* \*

(e) \* \* \*

(2) \* \* \*

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section.

\* \* \* \* \*

PART 264-STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

III. In part 264:

1. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, and 6925.

2. In § 264.1, paragraph (g)(2) is revised to read as follows:

§ 264.1 Purpose, scope, and applicability.

\* \* \* \* \*

(g) \* \* \*

(1) \* \* \*

(2) The owner or operator of a facility managing recyclable materials described in § 261.6(a) (2) and (3) of this chapter (except to the extent that requirements of this part are referred to in subparts C, F, G, or H of part 266 of this chapter).

\* \* \* \* \*

PART 265-INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

IV. In part 265:

1. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, 6925, and 6935.

2. In § 265.1, paragraph (c)(6) is revised to read as follows:

§ 265.1 Purpose, scope, and applicability.

\* \* \* \* \*

(c) \* \* \*

(6) The owner and operator of a facility managing recyclable materials described in § 261.6(a) (2) and (3) of this chapter (except to the extent that requirements of this part are referred to in subparts C, F, G, or H of part 266 of this chapter).

\* \* \* \* \*

PART 266-STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

V. In part 266:

1. The authority citation for part 266 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, and 3014 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6924, and 6934).

2. In § 266.100, paragraph (a) is amended by revising the first sentence to read as follows, and paragraph (f) introductory text is amended by revising, "§ 261.111" to read "§ 266.111".

§ 266.100 Applicability.

(a) The regulations of this subpart apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in § 260.10 of this chapter) irrespective of the purpose of burning or processing, except as provided by paragraphs (b), (c), (d), and (f) of this section. \* \* \*

\* \* \* \* \*

3. In § 266.101, the first sentence of paragraph (c)(1), and paragraph (c)(2) are revised to read as follows:

§ 266.101 Management prior to burning.

\* \* \* \* \*

(c) Storage Facilities. (1) Owners and operators of facilities that store hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of parts 264, 265, and 270 of this chapter, except as provided by paragraph (c)(2) of this section. \* \* \*

(2) Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of § 266.108, hazardous waste that they generate are exempt from the regulations of parts 264, 265, and 270 of this chapter applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in paragraph (c)(1) of this section.

4. Section 266.103 is amended by revising paragraphs (b)(2)(ii) introductory text and (iii), (b)(3)(ii)(B), (b)(3)(v), (c)(1) introductory text, (c)(1)(ii) (A) and (C), (c)(1)(iii), (c)(1)(vi), (c)(5), and (c)(7)(ii)(B) to read as follows:

§ 266.103 Interim status standards for burners.

(b) \* \* \*

(2) \* \* \*

(ii) Except for facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by §§ 266.106 (b) or (e) and 266.107 (b)(1) or (e), respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by § 266.106, and hydrogen chloride and chlorine, and the following information to support such determinations:

\* \* \* \* \*

(iii) For facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by §§ 266.106 (b) or (e) and 266.107 (b)(1) or (e), the feed rate (lb/hr) of total chlorine and chloride, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feed stream (hazardous waste, other fuels, industrial furnace feedstocks).

\* \* \* \* \*

(3) \* \* \*

(ii) \* \* \*

(B) Total hazardous waste feed, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under § 266.106 (b) or (e); and

\* \* \* \* \*

(v) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under § 266.107 (b)(1) or (e) and for all metals under § 266.106 (b) or (e), and the uncontrolled particulate emissions do not exceed the standard under § 266.105.

\* \* \* \* \*

(c) \* \* \*

(1) Limits on operating conditions. The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in paragraph (c)(4)(iv) of this section) or as otherwise specified and include these limits with the certification of compliance. The boiler or industrial furnace must be operated in accordance with these operating limits and the applicable emissions standards of §§ 266.104 (b) through (e), 266.105, 266.106, 266.107, and 266.103(a)(5)(I)(D) at all times when there is hazardous waste in the unit.

\* \* \* \* \*

(ii) \* \* \*

(A) Total feedstreams, except that:

(1) Facilities that comply with Tier I or Adjusted Tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under § 266.106 (b) or (e); and

(2) Industrial furnaces that must comply with the alternative metals implementation approach under paragraph (c)(3)(ii) of this section must specify limits on the concentration of each metal in the collected particulate matter in lieu of feed rate limits for total feedstreams;

(B) \* \* \*

(C) Total pumpable hazardous waste feed (unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under § 266.106 (b) or (e);

(iii) Total feed rate of chlorine and chloride in total feed streams, except that facilities that comply with Tier I or Adjusted Tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under § 266.107 (b)(1) or (e).

\* \* \* \* \*

(vi) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under § 266.107 (b)(1) or (e) and for all metals under § 266.106 (b) or (e), and the uncontrolled particulate emissions do not exceed the standard under § 266.105.

\* \* \* \* \*

(5) Special requirements for HC monitoring systems. When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by § 266.104(c) or paragraph (a)(5)(i)(D) of this section, a conditioned gas monitoring system may be used in conformance with specifications provided in appendix IX of this part provided that the owner or operator submits a certification of compliance without using extensions of time provided by paragraph (c)(7) of this section. However, owners and operators of facilities electing to comply with the alternative hydrocarbon provision of § 266.104(f) and requesting a time extension under § 266.103(c)(7)(ii)(B) may establish the baseline HC level and comply with the interim HC limit established by the time extension using a conditioned gas monitoring system if the Director determines that the owner or operator has demonstrated that they have made a good faith effort to operate a heated monitoring system but found it to be impracticable.

\* \* \* \* \*

(7) \* \* \*

(ii) \* \* \*

(B) When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provisions of § 266.104(f) and obtain a RCRA operating permit because the facility cannot meet the HC limit of § 266.104(c) of this chapter:

\* \* \* \* \*

5. Section 266.104 is amended by revising paragraph (f)(1) to read as follows:

§ 266.104 Standards to control organic emissions.

\* \* \* \* \*

(f) \* \* \*

(1) When the baseline HC (and CO) level is determined, the owner or operator must demonstrate that the facility is designed and operated to minimize hydrocarbon emissions from fuels and raw materials and that the facility is producing normal products under normal operating conditions feeding normal feedstocks and fuels. The baseline HC level is defined as the average over all valid test runs of the highest hourly rolling average HC value for each run when the facility does not burn hazardous waste, adjusted as appropriate to consider the variability of

hydrocarbon levels under good combustion operating conditions. The baseline CO level is determined based on the test runs used to establish the baseline HC level and is defined as the average over all test runs of the highest hourly rolling average CO value for each run. More than one baseline level must be determined if the facility operates under different modes that may generate significantly lower HC (and CO) levels;

\* \* \* \* \*

6. Section 266.106 is amended by revising paragraphs (b)(7) introductory text, (d)(1), (d)(5), and by revising the equation in paragraph (d)(3) to read as follows:

§ 266.106 Standards to control metals emissions.

\* \* \* \* \*

(b) \* \* \*

(7) Criteria for facilities not eligible for screening limits. If any criteria below are met, the Tier I and Tier II screening limits do not apply. Owners and operators of such facilities must comply with either the Tier III standards provided by paragraph (d) of this section or with the adjusted Tier I feed rate screening limits provided by paragraph (e) of this section.

\* \* \* \* \*

(d) Tier III and Adjusted Tier I site-specific risk assessment. The requirements of this paragraph apply to facilities complying with either the Tier III or Adjusted Tier I controls, except where specified otherwise.

(1) General. Conformance with the Tier III metals controls must be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the Tier III or Adjusted Tier I metals controls must be demonstrated by air dispersion modeling to predict the maximum annual average off-site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

\* \* \* \* \*

(3) \* \* \*

$$\sum_{i=1}^n \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk\&Specific Dose}_{(i)}} < 1.0$$

\* \* \* \* \*



(5) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must conduct emissions testing (except that facilities complying with Adjusted Tier I controls need not conduct emissions testing) and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels.

\* \* \* \* \*

7. Section 266.107 is amended by revising paragraph (a) to read as follows:

§ 266.107 Standards to control hydrogen chloride (HCl) and chlorine gas (Cl<sub>2</sub>) emissions.

(a) General. The owner or operator must comply with the hydrogen chloride (HCl) and chlorine (Cl<sub>2</sub>) controls provided by paragraph (b), (c), or (e) of this section.

\* \* \* \* \*

8. Section 266.108(c) is amended by revising the equation to read as follows:

§ 266.108 Small quantity on-site burner exemption.

\* \* \* \* \*

(c) \* \* \*

$$\frac{\sum_{i=1}^n \text{Actual Quantity Burned}_{(i)}}{\sum_{i=1}^n \text{Allowable Quantity Burned}_{(i)}} < 1.0$$

\* \* \* \* \*

9. Section 266.112 is amended by revising paragraph (b)(2)(i) to read as follows:

§ 266.112 Regulation of residues.

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(i) Nonmetal constituents. The concentration of each nonmetal toxic constituent of concern (specified in paragraph (b)(1) of this section) in the waste-derived residue must not exceed the health-based level specified in appendix VII of this part, or the level of detection (using analytical procedures prescribed in SW-846), whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures prescribed in SW-846), whichever is higher, shall be used; and

\* \* \* \* \*

#### Appendix IX [Amended]

10. In appendix IX, § 5.0, Hazardous Waste Combustion Air Quality Screening Procedure, Table 5.0-3.-Clarification of Land Use Types, footnote 1, revise "EPA-450/2-78-027" to read "EPA-450/2-78-027R".

11. In appendix IX, § 5.0, Hazardous Waste Combustion Air Quality Screening Procedure, in the title to Table 5.0-4, revise "ISCT" to read "ISCST", revise "PREDICATED" to read "PREDICTED", and revise "8G/M<sup>3</sup>" to read "g/m<sup>3</sup>".

12. In appendix IX, § 5.0, Hazardous Waste Combustion Air Quality Screening Procedure, in the title to Table 5.0-5, revise "ISCT" to read "ISCST", revise "PREDICATED" to read "PREDICTED", and revise "8G/M<sup>3</sup>" to read "g/m<sup>3</sup>".

13. In appendix IX, § 6.0-Simplified Land Use Classification Procedure for Compliance with Tier I and Tier II Limits, Subsection 6.1 Introduction: second paragraph, add a footnote "1" after "(EPA 1986)"; in footnote 1, revise "EPA-450/2-78-027" to read "EPA-450/2-78-027R"; and in the third paragraph, revise "Auer 3978" to read "Auer 1978".

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