under § 63.1216, you must establish 12hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average of the test run averages.

(iii) Cement kilns under § 63.1220— (A) When complying with the emission standards under §§ 63.1220(a)(3)(i), (a)(4)(i), (b)(3)(i), and (b)(4)(i), you must establish 12-hour rolling average feedrate limits for semivolatile and low volatile metals as the thermal concentration of semivolatile metals or low volatile metals in all hazardous waste feedstreams. You must calculate hazardous waste thermal concentrations for semivolatile metals and low volatile metals for each run as the total mass feedrate of semivolatile metals or low volatile metals for all hazardous waste feedstreams divided by the total heat input rate for all hazardous waste feedstreams. The 12-hour rolling average feedrate limits for semivolatile metals and low volatile metals are the average of the hazardous waste thermal concentrations for the runs.

(B) When complying with the emission standards under §§ 63.1220(a)(3)(ii), (a)(4)(ii), (b)(3)(ii), and (b)(4)(ii), you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average

of the test run averages.

(iv) Lightweight aggregate kilns under § 63.1221—(A) When complying with the emission standards under §§ 63.1221(a)(3)(i), (a)(4)(i), (b)(3)(i), and (b)(4)(i), you must establish 12-hour rolling average feedrate limits for semivolatile and low volatile metals as the thermal concentration of semivolatile metals or low volatile metals in all hazardous waste feedstreams as specified in paragraphs (n)(2)(iii)(A) of this section.

(B) When complying with the emission standards under §§ 63.1221(a)(3)(ii), (a)(4)(ii), (b)(3)(ii), and (b)(4)(ii), you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average

of the test run averages.

(v) Liquid fuel boilers under § 63.1217. (A) Semivolatile metals. You must establish a rolling average limit for the semivolatile metal feedrate as follows on an averaging period not to exceed an annual rolling average.

(1) System removal efficiency. You must calculate a semivolatile metal system removal efficiency for each test run and calculate the average system removal efficiency of the test run averages. If emissions exceed the semivolatile metal emission standard during the comprehensive performance

test, it is not a violation because the averaging period for the semivolatile metal emission standard is one year and compliance is based on compliance with the semivolatile metal feedrate limit that has an averaging period not to exceed an annual rolling average.

(2) Boilers that feed hazardous waste with a heating value of 10,000 Btu/lb or greater. You must calculate the semivolatile metal feedrate limit as the semivolatile metal emission standard divided by [1 – System Removal Efficiency].

(i) The feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of semivolatile metals in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler.

- (ii) You must comply with the hazardous waste semivolatile metal thermal concentration limit by determining the feedrate of semivolatile metal in all hazardous waste feedstreams (lb/hr) and the hazardous waste thermal feedrate (MM Btu/hr) at least once a minute to calculate a 60-minute average thermal emission concentration as [hazardous waste semivolatile metal feedrate (lb/hr) / hazardous waste thermal feedrate (MM Btu/hr)].
- (iii) You must calculate a rolling average hazardous waste semivolatile metal thermal concentration that is updated each hour.
- (iv) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.
- (3) Boilers that feed hazardous waste with a heating value less than 10,000 Btu/lb. (i) You must calculate the semivolatile metal feedrate limit as the semivolatile metal emission standard divided by [1 System Removal Efficiency].
- (ii) The feedrate limit is expressed as a mass concentration per unit volume of stack gas (μg/dscm) and is converted to a mass feedrate (lb/hr) by multiplying it by the average stack gas flowrate (dscm/hr) of the test run averages.
- (iii) You must comply with the feedrate limit by determining the semivolatile metal feedrate (lb/hr) at

least once a minute to calculate a 60-minute average feedrate.

(iv) You must update the rolling average feedrate each hour with this 60-minute feedrate measurement.

(v) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.

(B) Chromium. (1) Boilers that feed hazardous waste with a heating value of 10,000 Btu/lb or greater. (i) The feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of chromium in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler.

(ii) You must comply with the hazardous waste chromium thermal concentration limit by determining the feedrate of chromium in all hazardous waste feedstreams (lb/hr) and the hazardous waste thermal feedrate (MM Btu/hr) at least once a minute to calculate a 60-minute average thermal emission concentration as [hazardous waste chromium feedrate (lb/hr) / hazardous waste thermal feedrate (MM Btu/hr)]. You must update the rolling average feedrate each hour with this 60-minute average feedrate measurement.

(2) Boilers that feed hazardous waste with a heating value less than 10,000 Btu/lb. You must establish a 12-hour rolling average limit for the total feedrate (lb/hr) of chromium in all feedstreams as the average of the test run averages. You must update the rolling average feedrate each hour with a 60-minute average feedrate

measurement.

(vi) LVM limits for pumpable wastes. You must establish separate feedrate limits for low volatile metals in pumpable feedstreams using the procedures prescribed above for total low volatile metals. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if you base the total feedrate limit solely on the feedrate of pumpable feedstreams.

(vii) Extrapolation of feedrate levels. In lieu of establishing feedrate limits as specified in paragraphs (l)(1)(i) through (iii) of this section, you may request as part of the performance test plan under §§ 63.7(b) and (c) and §§ 63.1207(e) and (f) to use the semivolatile metal and low

volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

- (A) Performance test metal feedrates are appropriate (*i.e.*, whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and
- (B) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.
- (o) Hydrogen chloride and chlorine
- (1) Feedrate of total chlorine and chloride. (i) Incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, and hydrochloric acid production furnaces. You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and

inorganic) in all feedstreams as the average of the test run averages.

- (ii) Liquid fuel boilers. (A) Boilers that feed hazardous waste with a heating value not less than 10,000 Btu/lb. (1) The feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of chlorine (organic and inorganic) in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler.
- (2) You must establish a 12-hour rolling average feedrate limit as the average of the test run averages.
- (3) You must comply with the feedrate limit by determining the mass feedrate of hazardous waste feedstreams (lb/hr) at least once a minute and by knowing the chlorine (organic and inorganic) content and heating value (million Btu/lb) of hazardous waste feedstreams at all times to calculate a 60-minute average feedrate measurement as [hazardous waste chlorine feedrate (lb/hr) / hazardous waste thermal feedrate (million Btu/hr)]. You must update the rolling average feedrate each hour with this 60-minute average feedrate measurement.
- (B) Boilers that feed hazardous waste with a heating value less than 10,000

Btu/lb. You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages. You must update the rolling average feedrate each hour with a 60-minute average feedrate measurement.

* * * * *

- (r) Averaging periods. The averaging periods specified in this section for operating parameters are not-to-exceed averaging periods. You may elect to use shorter averaging periods. For example, you may elect to use a 1-hour rolling average rather than the 12-hour rolling average specified in paragraph (l)(1)(i) of this section for mercury.
- 12. Section 63.1210 is amended by:
- a. Revising the table in paragraph (a)(1) and the table in paragraph (a)(2).
- b. Redesignating paragraph (b) as (d).
- c. Adding new paragraph (b).
- d. Adding new paragraph (c).The revisions and additions read as follows:

§ 63.1210 What are the notification requirements?

- (a) * * *
- (1) * * *

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE of this Part. Notification that you are subject to special compliance requirements. Notification and documentation of any change in information already provided under § 63.9. Notification of changes in design, operation, or maintenance. Notification of excessive bag leak detection system exceedances. Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan. ¹
63.1210(b)	Notification of intent to comply. Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.

¹ You may also be required on a case-by-case basis to submit a feedstream analysis plan under § 63.1209(c)(3).

(2) * * *

Reference	Notification, request, petition, or application 6
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1204(d)(2)(iii), 63.1220(d)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(2)(iii), 63.1220(e)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(4), 63.1213, 63.6(i), 63.9(c)	You may request an extension of the compliance date for up to one year.
63.1206(b)(5)(i)(C)	You may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting after making a change in the design or operation that could affect compliance with emission standards and prior to submitting a revised Notification of Compliance.
63.1206(b)(8)(iii)(B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b)(8)(v)	You may request approval to have the particulate matter and opacity standards and associated operating limits and conditions waived for more than 96 hours for a correlation test.

Reference	Notification, request, petition, or application 6
63.1206(b)(9)	Owners and operators of lightweight aggregate kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas under certain conditions.
63.1206(b)(10)	Owners and operators of cement kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas under certain conditions.
63.1206(b)(14)	Owners and operators of incinerators may elect to comply with an alternative to the particulate matter standard.
63.1206(b)(15)	Owners and operators of cement and lightweight aggregate kilns may request to comply with the alternative to the interim standards for mercury.
63.1206(c)(2)(ii)(C)	You may request to make changes to the startup, shutdown, and malfunction plan. You may request an alternative means of control to provide control of combustion system leaks.
63.1206(c)(5)(i)(D)	You may request other techniques to prevent fugitive emissions without use of instantaneous pressure limits.
63.1207(c)(2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.
63.1207(d)(3)	You may request more than 60 days to complete a performance test if additional time is needed for reasons beyond your control.
63.1207(e)(3), 63.7(h)	You may request a time extension if the Administrator fails to approve or deny your test plan. You may request to waive current operating parameter limits during pretesting for more than 720 hours.
63.1207(f)(1)(ii)(D)	You may request a reduced hazardous waste feedstream analysis for organic hazardous air pollutants if the reduced analysis continues to be representative of organic hazardous air pollutants in your hazardous waste feedstreams.
63.1207(g)(2)(v)	You may request to operate under a wider operating range for a parameter during confirmatory performance testing.
63.1207(i)	You may request up to a one-year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1207(j)(4)	You may request more than 90 days to submit a Notification of Compliance after completing a performance test if additional time is needed for reasons beyond your control.
63.1207(I)(3)	After failure of a performance test, you may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting.
63.1209(a)(5), 63.8(f)	You may request: (1) Approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (2) approval to use a CEMS in lieu of operating parameter limits.
63.1209(g)(1)	You may request approval of: (1) Alternatives to operating parameter monitoring requirements, except for standards that you must monitor with a continuous emission monitoring system (CEMS) and except for requests to use a CEMS in lieu of operating parameter limits; or (2) a waiver of an operating parameter limit.
63.1209(I)(1)	You may request to extrapolate mercury feedrate limits.
63.1209(n)(2)	You may request to extrapolate semivolatile and low volatile metal feedrate limits.
63.1211(d)	You may request to use data compression techniques to record data on a less frequent basis than required by § 63.1209.

- (b) Notification of intent to comply (NIC). These procedures apply to sources that have not previously complied with the requirements of paragraph (b) of this section, and to sources that previously complied with the NIC requirements of § 63.1210, which were in effect prior to October 11, 2000, that must make a technology change requiring a Class 1 permit modification to meet the standards of §§ 63.1219, 63.1220, and 63.1221.
- (1) You must prepare a Notification of Intent to Comply that includes all of the following information:
 - (i) General information:
- (A) The name and address of the owner/operator and the source;
- (B) Whether the source is a major or an area source;
- (C) Waste minimization and emission control technique(s) being considered;
- (D) Emission monitoring technique(s) you are considering;

- (E) Waste minimization and emission control technique(s) effectiveness;
- (F) A description of the evaluation criteria used or to be used to select waste minimization and/or emission control technique(s); and
- (G) A general description of how you intend to comply with the emission standards of this subpart.
- (ii) As applicable to each source, information on key activities and estimated dates for these activities that will bring the source into compliance with emission control requirements of this subpart. You must include all of the following key activities and dates in your NIC:
- (A) The dates by which you anticipate you will develop engineering designs for emission control systems or process changes for emissions;
- (B) The date by which you anticipate you will commit internal or external

- resources for installing emission control systems or making process changes for emission control, or the date by which you will issue orders for the purchase of component parts to accomplish emission control or process changes.
- (C) The date by which you anticipate you will submit construction applications;
- (D) The date by which you anticipate you will initiate on-site construction, installation of emission control equipment, or process change;
- (E) The date by which you anticipate you will complete on-site construction, installation of emission control equipment, or process change; and
- (F) The date by which you anticipate you will achieve final compliance. The individual dates and milestones listed in paragraphs (b)(1)(ii)(A) through (F) of this section as part of the NIC are not requirements and therefore are not

enforceable deadlines; the requirements of paragraphs (b)(1)(ii)(A) through (F) of this section must be included as part of the NIC only to inform the public of how you intend to comply with the emission standards of this subpart.

(iii) A summary of the public meeting required under paragraph (c) of this

section;

(iv) If you intend to cease burning hazardous waste prior to or on the compliance date, the requirements of paragraphs (b)(1)(ii) and (b)(1)(iii) of this section do not apply. You must include in your NIC a schedule of key dates for the steps to be taken to stop hazardous waste activity at your combustion unit. Key dates include the date for submittal of RCRA closure documents required under subpart G, part 264 or subpart G, part 265 of this chapter.

(2) You must make a draft of the NIC available for public review no later than 30 days prior to the public meeting required under paragraph (c)(1) of this section or no later than 9 months after the effective date of the rule if you intend to cease burning hazardous waste prior to or on the compliance date.

(3) You must submit the final NIC to the Administrator no later than one year following the effective date of the emission standards of this subpart.

(c) NIC public meeting and notice. (1) Prior to the submission of the NIC to the permitting agency, and no later than 10 months after the effective date of the emission standards of this subpart, you must hold at least one informal meeting with the public to discuss anticipated activities described in the draft NIC for achieving compliance with the emission

standards of this subpart. You must post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses;

- (2) You must submit a summary of the meeting, along with the list of attendees and their addresses developed under paragraph (b)(1) of this section, and copies of any written comments or materials submitted at the meeting, to the Administrator as part of the final NIC, in accordance with paragraph (b)(1)(iii) of this section;
- (3) You must provide public notice of the NIC meeting at least 30 days prior to the meeting and you must maintain, and provide to the Administrator upon request, documentation of the notice. You must provide public notice in all of the following forms:
- (i) Newspaper advertisement. You must publish a notice in a newspaper of general circulation in the county or equivalent jurisdiction of your facility. In addition, you must publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdiction where such publication would be necessary to inform the affected public. You must publish the notice as a display advertisement.
- (ii) Visible and accessible sign. You must post a notice on a clearly marked sign at or near the source. If you place the sign on the site of the hazardous waste combustor, the sign must be large enough to be readable from the nearest spot where the public would pass by the site.
- (iii) *Broadcast media announcement.*You must broadcast a notice at least

once on at least one local radio station or television station.

- (iv) Notice to the facility mailing list. You must provide a copy of the notice to the facility mailing list in accordance with § 124.10(c)(1)(ix) of this chapter.
- (4) You must include all of the following in the notices required under paragraph (c)(3) of this section:
- (i) The date, time, and location of the meeting;
- (ii) A brief description of the purpose of the meeting;
- (iii) A brief description of the source and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the source location;
- (iv) A statement encouraging people to contact the source at least 72 hours before the meeting if they need special access to participate in the meeting;
- (v) A statement describing how the draft NIC (and final NIC, if requested) can be obtained; and
- (vi) The name, address, and telephone number of a contact person for the NIC.
- (5) The requirements of this paragraph do not apply to sources that intend to cease burning hazardous waste prior to or on the compliance date.
- 13. Section 63.1211 is amended by:
- a. Revising the table in paragraph (b).
- b. Revising paragraph (c)(1). The revisions read as follows:

§ 63.1211 What are the recordkeeping and reporting requirements?

* * * * * * (b) * * *

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Reference	Document, Data, or Information
63.1200, 63.10(b) and (c)	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by continuous monitoring systems (CMS), and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1204(d)(1)(ii), 63.1220(d)(1)(ii)	Documentation of mode of operation changes for cement kilns with in-line raw mills.
63.1204(d)(2)(ii), 63.1220(d)(2)(ii)	Documentation of compliance with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(2)(ii), 63.1220(e)(2)(ii)	Documentation of compliance with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)	If you elect to comply with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.
63.1206(b)(5)(ii)	Documentation that a change will not adversely affect compliance with the emission standards or operating requirements.
63.1206(b)(11)	Calculation of hazardous waste residence time.
63.1206(c)(2)	Startup, shutdown, and malfunction plan.
63.1206(c)(2)(v)(A)	Documentation of your investigation and evaluation of excessive exceedances during malfunctions.
63.1206(c)(3)(v)	Corrective measures for any automatic waste feed cutoff that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c)(3)(vii)	Documentation and results of the automatic waste feed cutoff operability testing.
63.1206(c)(4)(ii)	Emergency safety vent operating plan.
63.1206(c)(4)(iii)	Corrective measures for any emergency safety vent opening.
63.1206(c)(5)(ii)	Method used for control of combustion system leaks.
63.1206(c)(6)	Operator training and certification program.
63.1206(c)(7)(i)(D)	Operation and maintenance plan.
63.1209(c)(2)	Feedstream analysis plan.

Reference	Document, Data, or Information
63.1209(k)(6)(iii), 63.1209(k)(7)(ii), 63.1209(k)(9)(ii), 63.1209(c)(4)(iii). 63.1209(k)(7)(i)(C)	Documentation that a substitute activated carbon, dioxin/furan formation reaction inhibitor, or dry scrubber sorbent will provide the same level of control as the original material. Results of carbon bed performance monitoring. Documentation of changes in modes of operation. Documentation of compliance.

- (1) By the compliance date, you must develop and include in the operating record a Documentation of Compliance. You are not subject to this requirement, however, if you submit a Notification of Compliance under § 63.1207(j) prior to the compliance date. Upon inclusion of the Documentation of Compliance in the operating record, hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns regulated under the interim standards of §§ 63.1203, 63.1204, and 63.1205 are no longer subject to compliance with the previously applicable Notification of Compliance.
- 14. Section 63.1212 is added to subpart EEE to read as follows:

§ 63.1212 What are the other requirements pertaining to the NIC?

- (a) Certification of intent to comply. The Notice of Intent to Comply (NIC) must contain the following certification signed and dated by a responsible official as defined under § 63.2 of this chapter: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
- (b) New units. Any source that files a RCRA permit application or permit modification request for construction of a hazardous waste combustion unit after October 12, 2005 must:
- (1) Prepare a draft NIC according to § 63.1210(b) and make it available to the public upon issuance of the notice of NIC public meeting per § 63.1210(c)(3); (2) Prepare a draft comprehensive
- performance test plan pursuant to the requirements of § 63.1207 and make it available for public review upon issuance of the notice of NIC public meeting;
- (3) Provide notice to the public of a pre-application meeting pursuant to § 124.30 or notice to the public of a permit modification request pursuant to § 270.42 and;

- (4) Hold an informal public meeting 30 days following notice of NIC public meeting and notice of the preapplication meeting or notice of the permit modification request.
- (c) Information Repository specific to new combustion units. (1) Any source that files a RCRA permit application or modification request for construction of a new hazardous waste combustion unit after October 12, 2005 may be required to establish an information repository if deemed appropriate.
- (2) The Administrator may assess the need, on a case-by-case basis for an information repository. When assessing the need for a repository, the Administrator shall consider the level of public interest, the presence of an existing repository, and any information available via the New Source Review and Title V permit processes. If the Administrator determines a need for a repository, then the Administrator shall notify the facility that it must establish and maintain an information repository.
- (3) The information repository shall contain all documents, reports, data, and information deemed necessary by the Administrator. The Administrator shall have the discretion to limit the contents of the repository.
- (4) The information repository shall be located and maintained at a site chosen by the source. If the Administrator finds the site unsuitable for the purposes and persons for which it was established, due to problems with location, hours of availability, access, or other relevant considerations, then the Administrator shall specify a more appropriate site.
- (5) The Administrator shall require the source to provide a written notice about the information repository to all individuals on the source mailing list.
- (6) The source shall be responsible for maintaining and updating the repository with appropriate information throughout a period specified by the Administrator. The Administrator may close the repository at his or her discretion based on the considerations in paragraph (c)(2) of this section.
- 15. Section 63.1214 is amended by revising paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) to read as follows:

§63.1214 Implementation and enforcement.

*

- (c) * * *
- (1) Approval of alternatives to requirements in §§ 63.1200, 63.1203, 63.1204, 63.1205, 63.1206(a), 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221.
- (2) Approval of major alternatives to test methods under §§ 63.7(e)(2)(ii) and (f), 63.1208(b), and 63.1209(a)(1), as defined under § 63.90, and as required in this subpart.
- (3) Approval of major alternatives to monitoring under §§ 63.8(f) and 63.1209(a)(5), as defined under § 63.90, and as required in this subpart.
- (4) Approval of major alternatives to recordkeeping and reporting under §§ 63.10(f) and 63.1211(a) through (c), as defined under § 63.90, and as required in this subpart.
- 16. Section § 63.1215 is added to subpart EEE to read as follows:

§ 63.1215 What are the health-based compliance alternatives for total chlorine?

- (a) General. (1) Overview. You may establish and comply with health-based compliance alternatives for total chlorine under the procedures prescribed in this section for your hazardous waste combustors other than hydrochloric acid production furnaces. You may comply with these healthbased compliance alternatives in lieu of the emission standards for total chlorine provided under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. To identify and comply with the limits, you
- (i) Identify a total chlorine emission concentration (ppmv) expressed as chloride (Cl(-)) equivalent for each onsite hazardous waste combustor. You may select total chlorine emission concentrations as you choose to demonstrate eligibility for the risk-based limits under this section, except as provided by paragraph (b)(4) of this section;
- (ii) Apportion the total chlorine emission concentration between HCl and Cl₂ according to paragraph (b)(6)(i) of this section, and calculate HCl and Cl₂ emission rates (lb/hr) using the gas flowrate and other parameters from the most recent regulatory compliance test.

(iii) Calculate the annual average HClequivalent emission rate as prescribed in paragraph (b)(2) of this section.

(iv) Perform an eligibility demonstration to determine if your HClequivalent emission rate meets the national exposure standard and thus is below the annual average HClequivalent emission rate limit, as prescribed by paragraph (c) of this

(v) Submit your eligibility demonstration for review and approval, as prescribed by paragraph (e) of this section, which must include information to ensure that the 1-hour average HCl-equivalent emission rate limit is not exceeded, as prescribed by paragraph (d) of this section;

(vi) Demonstrate compliance with the annual average HCl-equivalent emission rate limit during the comprehensive performance test, as prescribed by the testing and monitoring requirements under paragraph (e) of this section;

(vii) Comply with compliance monitoring requirements, including establishing feedrate limits on total chlorine and chloride, and operating parameter limits on emission control equipment, as prescribed by paragraph (f) of this section; and

(viii) Comply with the requirements for changes, as prescribed by paragraph

(h) of this section.

(2) Definitions. In addition to the definitions under § 63.1201, the following definitions apply to this section:

1-Hour Average HCl-Equivalent Emission Rate means the HCl-equivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using 1-hour RELs as the health risk metric for acute exposure.

1-Hour Average HCl-Equivalent Emission Rate Limit means the HClequivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using 1-hour RELs as the health risk metric for acute exposure and which ensures that maximum 1hour average ambient concentrations of HCl-equivalents do not exceed a Hazard Index of 1.0, rounded to the nearest tenths decimal place (0.1), at an off-site receptor location.

Acute Reference Exposure Level (aREL) means health thresholds below which there would be no adverse health effects for greater than once in a lifetime exposures of one hour. ARELs are developed by the California Office of Health Hazard Assessment and are available at http://www.oehha.ca.gov/ air/acute_rels/acuterel.html.

Annual Average HCl-Equivalent Emission Rate means the HCl-equivalent ER_{HCl} is the emission rate of HCl in emission rate (lb/hr) determined by

equating the toxicity of chlorine to HCl using RfCs as the health risk metric for long-term exposure.

Ānnual Average HCl-Equivalent Emission Rate Limit means the HClequivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using RfCs as the health risk metric for long-term exposure and which ensures that maximum annual average ambient concentrations of HCl equivalents do not exceed a Hazard Index of 1.0, rounded to the nearest tenths decimal place (0.1), at an off-site receptor location.

Hazard Index (HI) means the sum of more than one Hazard Quotient for multiple substances and/or multiple exposure pathways. In this section, the Hazard Index is the sum of the Hazard Quotients for HCl and chlorine.

Hazard Quotient (HQ) means the ratio of the predicted media concentration of a pollutant to the media concentration at which no adverse effects are expected. For chronic inhalation exposures, the HQ is calculated under this section as the air concentration divided by the RfC. For acute inhalation exposures, the HQ is calculated under this section as the air concentration divided by the aREL.

Look-up table analysis means a risk screening analysis based on comparing the HCl-equivalent emission rate from the affected source to the appropriate HCl-equivalent emission rate limit specified in Tables 1 through 4 of this

Reference Concentration (RfC) means an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

- (b) HCl-equivalent emission rates. (1) You must express total chlorine emission rates for each hazardous waste combustor as HCl-equivalent emission
- (2) Annual average rates. You must calculate annual average toxicityweighted HCl-equivalent emission rates for each combustor as follows: $ER_{tw} = ER_{HCl} + ER_{Cl2} \times (RfC_{HCl}/RfC_{Cl2})$
- ER_{LTtw} is the annual average HCl toxicity-weighted emission rate (HCl-equivalent emission rate) considering long-term exposures, lb/hr

lbs/hr

ER_{C12} is the emission rate of chlorine in lbs/hr

RfC_{HCl} is the reference concentration of HCl

 RfC_{C12} is the reference concentration of chlorine

(3) 1-hour average rates. You must calculate 1-hour average toxicityweighted HCl-equivalent emission rates for each combustor as follows:

 $ER_{STtw} = ER_{HCl} + ER_{Cl2} \times (aREL_{HCl}/$ aREL_{C12})

Where:

ER_{STtw} is the 1-hour average HCl toxicity-weighted emission rate (HCl-equivalent emission rate) considering 1-hour (short-term) exposures, lb/hr

ER_{HCl} is the emission rate of HCl in lbs/ hr

 ER_{Cl2} is the emission rate of chlorine in lbs/hr

aREL_{HCl} is the 1-hour Reference Exposure Level of HCl aREL_{C12} is the 1-hour Reference Exposure Level of chlorine

- (4) You must use the RfC values for hydrogen chloride and chlorine found at http://epa.gov/ttn/atw/toxsource/ summary.html.
- (5) You must use the aREL values for hydrogen chloride and chlorine found at http://www.oehha.ca.gov/air/ acute_rels/acuterel.html.
- (6) Cl₂HCl ratios—(i) Ratio for calculating annual average HClequivalent emission rates. (A) To calculate the annual average HClequivalent emission rate (lb/hr) for each combustor, you must apportion the total chlorine emission concentration (ppmv chloride (Cl(-)) equivalent) between HCl and chlorine according to the historical average Cl₂/HCl volumetric ratio for all regulatory compliance tests.

(B) You must calculate HCl and Cl₂ emission rates (lb/hr) using the apportioned emission concentrations and the gas flowrate and other parameters from the most recent regulatory compliance test.

(C) You must calculate the annual average HCl-equivalent emission rate using these HCl and Cl₂ emission rates and the equation in paragraph (b)(2) of this section.

(ii) Ratio for calculating 1-hour average HCl-equivalent emission rates. (A) To calculate the 1-hour average HClequivalent emission rate for each combustor as a criterion for you to determine under paragraph (d) of this section if an hourly rolling average feedrate limit on total chlorine and chloride may be waived, you must apportion the total chlorine emission concentration (ppmv chloride (Cl(-)) equivalent) between HCl and chlorine

according to the historical highest Cl₂/ HCl volumetric ratio for all regulatory

compliance tests.

(B) You must calculate HCl and Cl₂ emission rates (lb/hr) using the apportioned emission concentrations and the gas flowrate and other parameters from the most recent regulatory compliance test.

(C) You must calculate the 1-hour average HCl-equivalent emission rate using the se HCl and Cl_2 emission rates and the equation in paragraph (b)(3) of

this section.

- (iii) Ratios for new sources. (A) You must use engineering information to estimate the Cl₂/HCl volumetric ratio for a new source for the initial eligibility demonstration.
- (B) You must use the Cl₂/HCl volumetric ratio demonstrated during the initial comprehensive performance test to demonstrate in the Notification of Compliance that your HCl-equivalent emission rate does not exceed your HCl-equivalent emission rate limit.

(C) When approving the test plan for the initial comprehensive performance test, the permitting authority will establish a periodic testing requirement, such as every 3 months for 1 year, to establish a record of representative Cl₂/

HCl volumetric ratios.

(1) You must revise your HClequivalent emission rates and HClequivalent emission rate limits after each such test using the procedures prescribed in paragraphs (b)(6)(i) and (ii) of this section.

(2) If you no longer are eligible for the health-based compliance alternative, you must notify the permitting authority

immediately and either:

(i) Submit a revised eligibility demonstration requesting lower HCl-equivalent emission rate limits, establishing lower HCl-equivalent emission rates, and establishing by downward extrapolation lower feedrate limits for total chlorine and chloride; or

(*ii*) Request a compliance schedule of up to three years to demonstrate compliance with the emission standards under §§ 63.1216, 63.1217, 63.1219,

63.1220, and 63.1221.

- (iv) Unrepresentative or inadequate historical Cl₂/HCl volumetric ratios. (A) If you believe that the Cl₂/HCl volumetric ratio for one or more historical regulatory compliance tests is not representative of the current ratio, you may request that the permitting authority allow you to screen those ratios from the analysis of historical ratios.
- (B) If the permitting authority believes that too few historical ratios are available to calculate a representative average ratio or establish a maximum

- ratio, the permitting authority may require you to conduct periodic testing to establish representative ratios.
- (v) Updating Cl₂/HCl ratios. You must include the Cl₂/HCl volumetric ratio demonstrated during each performance test in your data base of historical Cl₂/HCl ratios to update the ratios you establish under paragraphs (b)(6)(i) and (ii) of this section for subsequent calculations of the annual average and 1-hour average HCl-equivalent emission rates.
- (7) Emission rates are capped. The hydrogen chloride and chlorine emission rates you use to calculate the HCl-equivalent emission rate limit for incinerators, cement kilns, and lightweight aggregate kilns must not result in total chlorine emission concentrations exceeding:
- (i) For incinerators that were existing sources on April 19, 1996: 77 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;
- (ii) For incinerators that are new or reconstructed sources after April 19, 1996: 21 parts per million by volume, combined emissions, expressed as chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen;
- (iii) For cement kilns that were existing sources on April 19, 1996: 130 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;
- (iv) For cement kilns that are new or reconstructed sources after April 19, 1996: 86 parts per million by volume, combined emissions, expressed as chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen;
- (v) For lightweight aggregate kilns that were existing sources on April 19, 1996: 600 parts per million by volume, combined emissions, expressed as chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen;
- (vi) For lightweight aggregate kilns that are new or reconstructed sources after April 19, 1996: 600 parts per million by volume, combined emissions, expressed as chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen.
- (c) Eligibility demonstration—(1) General. (i) You must perform an eligibility demonstration to determine whether the total chlorine emission rates you select for each on-site hazardous waste combustor meet the national exposure standards using either a look-up table analysis prescribed by paragraph (c)(3) of this section, or a site-specific compliance demonstration

- prescribed by paragraph (c)(4) of this section.
- (ii) You must also determine in your eligibility demonstration whether each combustor may exceed the 1-hour HCl-equivalent emission rate limit absent an hourly rolling average limit on the feedrate of total chlorine and chloride, as provided by paragraph (d) of this section.
- (2) Definition of eligibility. (i) Eligibility for the risk-based total chlorine standard is determined by comparing the annual average HCl-equivalent emission rate for the total chlorine emission rate you select for each combustor to the annual average HCl-equivalent emission rate limit.
- (ii) The annual average HCl-equivalent emission rate limit ensures that the Hazard Index for chronic exposure from HCl and chlorine emissions from all on-site hazardous waste combustors is less than or equal to 1.0, rounded to the nearest tenths decimal place (0.1), for the actual individual most exposed to the facility's emissions, considering off-site locations where people reside and where people congregate for work, school, or recreation.
- (iii) Your facility is eligible for the health-based compliance alternative for total chlorine if either:
- (A) The annual average HClequivalent emission rate for each on-site hazardous waste combustor is below the appropriate value in the look-up table determined under paragraph (c)(3) of this section; or
- (B) The annual average HCl-equivalent emission rate for each on-site hazardous waste combustor is below the annual average HCl-equivalent emission rate limit you calculate based on a site-specific compliance demonstration under paragraph (c)(4) of this section.

(3) Look-up table analysis. Look-up tables for the eligibility demonstration are provided as Tables 1 and 2 to this section.

section.

(i) Table 1 presents annual average HCl-equivalent emission rate limits for sources located in flat terrain. For purposes of this analysis, flat terrain is terrain that rises to a level not exceeding one half the stack height within a distance of 50 stack heights.

(ii) Table 2 presents annual average HCl-equivalent emission rate limits for sources located in simple elevated terrain. For purposes of this analysis, simple elevated terrain is terrain that rises to a level exceeding one half the stack height, but that does not exceed the stack height, within a distance of 50 stack heights.

(iii) To determine the annual average HCl-equivalent emission rate limit for a source from the look-up table, you must use the stack height and stack diameter for your hazardous waste combustors and the distance between the stack and the property boundary.

(iv) If any of these values for stack height, stack diameter, and distance to nearest property boundary do not match the exact values in the look-up table, you must use the next lowest table value.

(v) Adjusted HCl-equivalent emission rate limit for multiple on-site combustors. (A) If you have more than one hazardous waste combustor on site, the sum across all hazardous waste combustors of the ratio of the adjusted HCl-equivalent emission rate limit to the HCl-equivalent emission rate limit provided by Tables 1 or 2 cannot exceed 1.0, according to the following equation:

 $\sum_{i=1}^{n} \frac{\text{HC1-Equivalent Emission Rate Limit Adjusted}_{i}}{\text{HCI-Equivalent Emission Rate Limit Table}_{i}} \leq 1.0$

Where:

i = number of on-site hazardous waste combustors;

HCl-Equivalent Emission Rate Limit Adjusted; means the apportioned, allowable HCl-equivalent emission rate limit for combustor i, and

HCl-Equivalent Emission Rate Limit Table_i means the HCl-equivalent emission rate limit from Table 1 or 2 to \S 63.1215 for combustor *i*.

(B) The adjusted HCl-equivalent emission rate limit becomes the HClequivalent emission rate limit.

- (4) Site-specific compliance demonstration. (i) You may use any scientifically-accepted peer-reviewed risk assessment methodology for your site-specific compliance demonstration to calculate an annual average HClequivalent emission rate limit for each on-site hazardous waste combustor. An example of one approach for performing the demonstration for air toxics can be found in the EPA's "Air Toxics Risk Assessment Reference Library, Volume 2, Site-Specific Risk Assessment Technical Resource Document," which may be obtained through the EPA's Air Toxics Web site at http://www.epa.gov/ ttn/fera/risk atra main.html.
- (ii) The annual average HClequivalent emission rate limit is the HCl-equivalent emission rate that ensures that the Hazard Index associated with maximum annual average exposures is not greater than 1.0 rounded to the nearest tenths decimal place (0.1).

(iii) To determine the annual average HCl-equivalent emission rate limit, your site-specific compliance demonstration must, at a minimum:

(A) Estimate long-term inhalation exposures through the estimation of annual or multi-year average ambient concentrations:

(B) Estimate the inhalation exposure for the actual individual most exposed to the facility's emissions from hazardous waste combustors, considering off-site locations where people reside and where people congregate for work, school, or recreation;

(C) Use site-specific, quality-assured data wherever possible;

(D) Use health-protective default assumptions wherever site-specific data are not available, and:

(E) Contain adequate documentation of the data and methods used for the assessment so that it is transparent and can be reproduced by an experienced risk assessor and emissions measurement expert.

(iv) Your site-specific compliance demonstration need not:

(A) Assume any attenuation of exposure concentrations due to the penetration of outdoor pollutants into indoor exposure areas;

(B) Assume any reaction or deposition of the emitted pollutants during transport from the emission point to the

point of exposure.

- (d) Assurance that the 1-hour HClequivalent emission rate limit will not be exceeded. To ensure that the 1-hour HCl-equivalent emission rate limit will not be exceeded when complying with the annual average HCl-equivalent emission rate limit, you must establish a 1-hour average HCl-equivalent emission rate for each combustor, establish a 1-hour average HClequivalent emission rate limit for each combustor, and consider site-specific factors including prescribed criteria to determine if the 1-hour average HClequivalent emission rate limit may be exceeded absent an hourly rolling average limit on the feedrate of total chlorine and chloride. If the 1-hour average HCl-equivalent emission rate limit may be exceeded, you must establish an hourly rolling average feedrate limit on total chlorine as provided by paragraph (f)(3) of this section.
- (1) 1-hour average HCl-equivalent emission rate. You must calculate the 1-hour average HCl-equivalent emission rate from the total chlorine emission concentration you select for each source as prescribed in paragraph (b)(6)(ii)(C) of this section.
- (2) 1-hour average HCl-equivalent emission rate limit. You must establish the 1-hour average HCl-equivalent

emission rate limit for each affected source using either a look-up table analysis or site-specific analysis:

- (i) Look-up table analysis. Look-up tables are provided for 1-hour average HCl-equivalent emission rate limits as Table 3 and Table 4 to this section.

 Table 3 provides limits for facilities located in flat terrain. Table 4 provides limits for facilities located in simple elevated terrain. You must use the Tables to establish 1-hour average HCl-equivalent emission rate limits as prescribed in paragraphs (c)(3)(iii) through (c)(3)(v) of this section for annual average HCl-equivalent emission rate limits.
- (ii) Site-specific analysis. The 1-hour average HCl-equivalent emission rate limit is the HCl-equivalent emission rate that ensures that the Hazard Index associated with maximum 1-hour average exposures is not greater than 1.0 rounded to the nearest tenths decimal place (0.1). You must follow the risk assessment procedures under paragraph (c)(4) of this section to estimate short-term inhalation exposures through the estimation of maximum 1-hour average ambient concentrations.
- (3) Criteria for determining whether the 1-hour HCl-equivalent emission rate may be exceeded absent an hourly rolling average limit on the feedrate of total chlorine and chloride. An hourly rolling average feedrate limit on total chlorine and chloride is waived if you determine considering the criteria listed below that the long-term feedrate limit (and averaging period) established under paragraph (c)(4)(i) of this section will also ensure that the 1-hour average HCl-equivalent emission rate will not exceed the 1-hour average HClequivalent emission rate limit you calculate for each combustor.
- (i) The ratio of the 1-hour average HCl-equivalent emission rate based on the total chlorine emission rate you select for each hazardous waste combustor to the 1-hour average HCl-equivalent emission rate limit for the combustor; and
- (ii) The potential for the source to vary total chlorine and chloride

- feedrates substantially over the averaging period for the feedrate limit established under paragraph (c)(4)(i) of this section.
- (e) Review and approval of eligibility demonstrations—(1) Content of the eligibility demonstration—(i) General. The eligibility demonstration must include the following information, at a minimum:
- (A) Identification of each hazardous waste combustor combustion gas emission point (e.g., generally, the flue gas stack);
- (B) The maximum and average capacity at which each combustor will operate, and the maximum rated capacity for each combustor, using the metric of stack gas volume (under both actual and standard conditions) emitted per unit of time, as well as any other metric that is appropriate for the combustor (e.g., million Btu/hr heat input for boilers; tons of dry raw material feed/hour for cement kilns);
- (C) Stack parameters for each combustor, including, but not limited to stack height, stack diameter, stack gas temperature, and stack gas exit velocity;
- (D) Plot plan showing all stack emission points, nearby residences and property boundary line;
- (É) Identification of any stack gas control devices used to reduce emissions from each combustor;
- (F) Identification of the RfC values used to calculate annual average HClequivalent emission rates and the aREL values used to calculate 1-hour average HCl-equivalent emission rates;
- (G) Calculations used to determine the annual average and 1-hour average HCl-equivalent emission rates and rate limits, including calculation of the Cl_2/HCl ratios as prescribed by paragraph (b)(6) of this section;
- (ii) Additional content to implement the annual average HCl-equivalent emission rate limit. You must include the following in your eligibility demonstration to implement the annual average HCl-equivalent emission rate limit:
- (A) For incinerators, cement kilns, and lightweight aggregate kilns, calculations to confirm that the annual average HCl-equivalent emission rate that you calculate from the total chlorine emission rate you select for each combustor does not exceed the limits provided by paragraph (b)(7) of this section;
- (B) Comparison of the annual average HCl-equivalent emission rate limit for each combustor to the annual average HCl-equivalent emission rate for the total chlorine emission rate you select for each combustor;

- (C) The annual average HClequivalent emission rate limit for each hazardous waste combustor, and the limits on operating parameters required under paragraph (g)(1) of this section;
- (D) Determination of the long-term chlorine feedrate limit, including the total chlorine system removal efficiency for sources that establish an (up to) annual rolling average feedrate limit under paragraph (g)(2)(ii) of this section;
- (iii) Additional content to implement the 1-hour average HCl-equivalent emission rate limit. You must include the following in your eligibility demonstration to implement the 1-hour average HCl-equivalent emission rate limit:
- (A) Determination of whether the combustor may exceed the 1-hour HCl-equivalent emission rate limit absent an hourly rolling average chlorine feedrate limit, including:
- (1) Determination of the 1-hour average HCl-equivalent emission rate from the total chlorine emission rate you select for the combustor;
- (2) Determination of the 1-hour average HCl-equivalent emission rate limit using either look-up Tables 3 and 4 to this section or site-specific risk analysis;
- (3) Determination of the ratio of the 1-hour average HCl-equivalent emission rate to the 1-hour average HCl-equivalent emission rate limit for the combustor; and
- (4) The potential for the source to vary total chlorine and chloride feedrates substantially over the averaging period for the long-term feedrate limit established under paragraphs (g)(2)(i) and (g)(2)(ii) of this section; and
- (B) Determination of the hourly rolling average chlorine feedrate limit, including the total chlorine system removal efficiency.
- (iv) Additional content of a look-up table demonstration. If you use the look-up table analysis to establish HCl-equivalent emission rate limits, your eligibility demonstration must also contain, at a minimum, the following:
- (A) Documentation that the facility is located in either flat or simple elevated terrain; and
- (B) For facilities with more than one on-site hazardous waste combustor, documentation that the sum of the ratios for all such combustors of the HCl-equivalent emission rate to the HCl-equivalent emission rate limit does not exceed 1.0.
- (v) Additional content of a sitespecific compliance demonstration. If you use a site-specific compliance demonstration, your eligibility demonstration must also contain, at a minimum, the following information to

- support your determination of the annual average HCl-equivalent emission rate limit for each combustor:
- (A) Identification of the risk assessment methodology used;
- (B) Documentation of the fate and transport model used;
- (C) Documentation of the fate and transport model inputs, including the stack parameters listed in paragraph (d)(1)(i)(C) of this section converted to the dimensions required for the model;
 - (D) As applicable:
 - (1) Meteorological data;
- (2) Building, land use, and terrain data;
- (3) Receptor locations and population data, including areas where people congregate for work, school, or recreation; and
- (4) Other facility-specific parameters input into the model;
- (E) Documentation of the fate and transport model outputs; and
- (F) Documentation of any exposure assessment and risk characterization calculations.
- (2) Review and approval—(i) Existing sources. (A) If you operate an existing source, you must submit the eligibility demonstration to your permitting authority for review and approval not later than 12 months prior to the compliance date. You must also submit a separate copy of the eligibility demonstration to: U.S. EPA, Risk and Exposure Assessment Group, Emission Standards Division (C404–01), Attn: Group Leader, Research Triangle Park, North Carolina 27711, electronic mail address REAG@epa.gov.
- (B) Your permitting authority should notify you of approval or intent to disapprove your eligibility demonstration within 6 months after receipt of the original demonstration, and within 3 months after receipt of any supplemental information that you submit. A notice of intent to disapprove your eligibility demonstration, whether before or after the compliance date, will identify incomplete or inaccurate information or noncompliance with prescribed procedures and specify how much time you will have to submit additional information or to achieve the MACT standards for total chlorine under §§ 63.1216, 63.1217, 63.1219. 63.1220, and 63.1221. If your eligibility demonstration is disapproved, the permitting authority may extend the compliance date of the total chlorine standards to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT total chlorine standards.

- (C) If your permitting authority has not approved your eligibility demonstration by the compliance date, and has not issued a notice of intent to disapprove your demonstration, you may nonetheless begin complying, on the compliance date, with the HCl-equivalent emission rate limits you present in your eligibility demonstration.
- (D) If your permitting authority issues a notice of intent to disapprove your eligibility demonstration after the compliance date, the authority will identify the basis for that notice and specify how much time you will have to submit additional information or to comply with the MACT standards for total chlorine under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. The permitting authority may extend the compliance date of the total chlorine standards to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT standards for total chlorine.
- (ii) New or reconstructed sources. (A) General. The procedures for review and approval of eligibility demonstrations applicable to existing sources under paragraph (e)(2)(i) of this section also apply to new or reconstructed sources, except that the date you must submit the eligibility demonstration is as prescribed in this paragraph (e)(2)(ii).

(B) If you operate a new or reconstructed source that starts up before April 12, 2007, or a solid fuel boiler or liquid fuel boiler that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP before April 12,

2007, you must either:

(1) Comply with the final total chlorine emission standards under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221, by October 12, 2005, or upon startup, whichever is later, except for a standard that is more stringent than the standard proposed on April 20, 2004 for your source. If a final standard is more stringent than the proposed standard, you may comply with the proposed standard until October 14, 2008, after which you must comply with the final standard; or

(2) Submit an eligibility demonstration for review and approval under this section by April 12, 2006, and comply with the HCl-equivalent emission rate limits and operating requirements you establish in the eligibility demonstration.

(C) If you operate a new or reconstructed source that starts up on or after April 12, 2007, or a solid fuel boiler or liquid fuel boiler that is an area

source that increases its emissions or its potential to emit such that it becomes a major source of HAP on or after April

12, 2007, you must either:

(1) Comply with the final total chlorine emission standards under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221 upon startup. If the final standard is more stringent than the standard proposed for your source on April 20, 2004, however, and if you start operations before October 14, 2008, you may comply with the proposed standard until October 14, 2008, after which you must comply with the final standard; or

(2) Submit an eligibility demonstration for review and approval under this section 12 months prior to

startup.

(f) *Testing requirements*—(1) *General*. You must comply with the requirements for comprehensive performance testing under § 63.1207.

(2) System removal efficiency. (i) You must calculate the total chlorine removal efficiency of the combustor during each run of the comprehensive performance test.

(ii) You must calculate the average system removal efficiency as the average of the test run averages.

(iii) If your source does not control emissions of total chlorine, you must assume zero system removal efficiency.

- (3) Annual average HCl-equivalent emission rate limit. If emissions during the comprehensive performance test exceed the annual average HCl-equivalent emission rate limit, eligibility for emission limits under this section is not affected. This emission rate limit is an annual average limit even though compliance is based on a 12-hour or (up to) an annual rolling average feedrate limit on total chlorine and chloride because the feedrate limit is also used for compliance assurance for the semivolatile metal emission standard
- (4) 1-hour average HCl-equivalent emission rate limit. Total chlorine emissions during each run of the comprehensive performance test cannot exceed the 1-hour average HClequivalent emission rate limit.
- (5) Test methods. (i) If you operate a cement kiln or a combustor equipped with a dry acid gas scrubber, you must use EPA Method 320/321 or ASTM D 6735–01, or an equivalent method, to measure hydrogen chloride, and the back-half (caustic impingers) of Method 26/26A, or an equivalent method, to measure chlorine gas.
- (ii) Bromine and sulfur considerations. If you operate an incinerator, boiler, or lightweight aggregate kiln and your feedstreams contain bromine or sulfur during the

- comprehensive performance test at levels specified under paragraph (e)(2)(ii)(B) of this section, you must use EPA Method 320/321 or ASTM D 6735–01, or an equivalent method, to measure hydrogen chloride, and Method 26/26A, or an equivalent method, to measure chlorine and hydrogen chloride, and determine your chlorine emissions as follows:
- (A) You must determine you chlorine emissions to be the higher of the value measured by Method 26/26A, or an equivalent method, or the value calculated by difference between the combined hydrogen chloride and chlorine levels measured by Method 26/26a, or an equivalent method, and the hydrogen chloride measurement from EPA Method 320/321 or ASTM D 6735—01, or an equivalent method.

(B) The procedures under paragraph (f)(2)(ii) of this section for determining hydrogen chloride and chlorine emissions apply if you feed bromine or sulfur during the performance test at the levels specified in this paragraph

(f)(5)(ii)(B):

(1) If the bromine/chlorine ratio in feedstreams is greater than 5 percent by mass; or

(2) If the sulfur/chlorine ratio in feedstreams is greater than 50 percent by mass.

- (g) Monitoring requirements. (1) General. You must establish and comply with limits on the same operating parameters that apply to sources complying with the MACT standard for total chlorine under § 63.1209(o), except that feedrate limits on total chlorine and chloride must be established according to paragraphs (g)(2) and (g)(3) of this section:
- (2) Feedrate limit to ensure compliance with the annual average HCl-equivalent emission rate limit. (i) For sources subject to the feedrate limit for total chlorine and chloride under § 63.1209(n)(4) to ensure compliance with the semivolatile metals standard:

(A) The feedrate limit (and averaging period) for total chlorine and chloride to ensure compliance with the annual average HCl-equivalent emission rate limit is the same as required by § 63.1209(n)(4), except as provided by paragraph (g)(2)(i)(B) of this section.

(B) The numerical value of the total chlorine and chloride feedrate limit (*i.e.*, not considering the averaging period) you establish under § 63.1209(n)(4) must not exceed the value you calculate as the annual average HCl-equivalent emission rate limit (lb/hr) divided by [1 — system removal efficiency], where the system removal efficiency is calculated as prescribed by paragraph (f)(2) of this section.

(ii) For sources exempt from the feedrate limit for total chlorine and chloride under § 63.1209(n)(4) because they comply with § 63.1207(m)(2), the feedrate limit for total chlorine and chloride to ensure compliance with the annual average HCl-equivalent emission rate must be established as follows:

(A) You must establish an average period for the feedrate limit that does not exceed an annual rolling average;

- (B) The numerical value of the total chlorine and chloride feedrate limit (*i.e.*, not considering the averaging period) must not exceed the value you calculate as the annual average HCl-equivalent emission rate limit (lb/hr) divided by [1 system removal efficiency], where the system removal efficiency is calculated as prescribed by paragraph (f)(2) of this section.
- (C) You must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.
- (3) Feedrate limit to ensure compliance with the 1-hour average HCl-equivalent emission rate limit. (i) You must establish an hourly rolling average feedrate limit on total chlorine and chloride to ensure compliance with the 1-hour average HCl-equivalent emission rate limit unless you determine that the hourly rolling average feedrate limit is waived under paragraph (d) of this section.

(ii) You must calculate the hourly rolling average feedrate limit for total chlorine and chloride as the 1-hour average HCl-equivalent emission rate limit (lb/hr) divided by [1 – system removal efficiency], where the system removal efficiency is calculated as

prescribed by paragraph (f)(2)(ii) of this section.

- (h) Changes—(1) Changes over which you have control. (i) Changes that would affect the HCl-equivalent emission rate limit. (A) If you plan to change the design, operation, or maintenance of the facility in a manner than would decrease the annual average or 1-hour average HCl-equivalent emission rate limit, you must submit to the permitting authority prior to the change a revised eligibility demonstration documenting the lower emission rate limits and calculations of reduced total chlorine and chloride feedrate limits.
- (B) If you plan to change the design, operation, or maintenance of the facility in a manner than would increase the annual average or 1-hour average HClequivalent emission rate limit, and you elect to increase your total chlorine and chloride feedrate limits. You must also submit to the permitting authority prior to the change a revised eligibility demonstration documenting the increased emission rate limits and calculations of the increased feedrate limits prior to the change.
- (ii) Changes that could affect system removal efficiency. (A) If you plan to change the design, operation, or maintenance of the combustor in a manner than could decrease the system removal efficiency, you are subject to the requirements of § 63.1206(b)(5) for conducting a performance test to reestablish the combustor's system removal efficiency and you must submit a revised eligibility demonstration documenting the lower system removal efficiency and the reduced feedrate limits on total chlorine and chloride.
- (B) If you plan to change the design, operation, or maintenance of the combustor in a manner than could increase the system removal efficiency, and you elect to document the increased system removal efficiency to establish higher feedrate limits on total chlorine and chloride, you are subject to the requirements of § 63.1206(b)(5) for

- conducting a performance test to reestablish the combustor's system removal efficiency. You must also submit to the permitting authority a revised eligibility demonstration documenting the higher system removal efficiency and the increased feedrate limits on total chlorine and chloride.
- (2) Changes over which you do not have control that may decrease the HClequivalent emission rate limits. These requirements apply if you use a site-specific risk assessment under paragraph (c)(4) of this section to demonstrate eligibility for the health-based limits.
- (i) Proactive review. You must review the documentation you use in your eligibility demonstration every five years from the date of the comprehensive performance test and submit for review and approval with the comprehensive performance test plan either a certification that the information used in your eligibility demonstration has not changed in a manner that would decrease the annual average or 1-hour average HClequivalent emission rate limit, or a revised eligibility demonstration.
- (ii) Reactive review. If in the interim between your comprehensive performance tests you have reason to know of changes that would decrease the annual average or 1-hour average HCl-equivalent emission rate limit, you must submit a revised eligibility demonstration as soon as practicable but not more frequently than annually.
- (iii) Compliance schedule. If you determine that you cannot demonstrate compliance with a lower annual average HCl-equivalent emission rate limit during the comprehensive performance test because you need additional time to complete changes to the design or operation of the source, you may request that the permitting authority grant you additional time to make those changes as quickly as practicable.

BILLING CODE 6560-50-P

					Dietano	ato prope	Distance to property boundary (m)	(m) /ue				
Stack Diameter =	= 0.3 m	,				4014	nunoa fan	(111)				
Stack Height (m)	30	20	20	100	200	300	200	700	1000	2000	3000	2000
5	3.7E-01	4.9E-01	7.3E-01	9.1E-01	1.6E+00	2.3E+00	4.1E+00	5.7E+00	6.1E+00	1.0E+01	1.6E+01	2.9E+01
10	1.0E+00	1.0E+00	1.1E+00	1.5E+00	2.1E+00	2.7E+00	4.8E+00	5.7E+00	6.5E+00	1.1E+01	1.8E+01	3.2E+01
20	2.3E+00	2.3E+00	2.3E+00	2.3E+00	2.7E+00	3.7E+00	5.6E+00	7.4E+00	1.0E+01	1.9E+01	2.9E+01	5.2E+01
30	4.1E+00	4.1E+00	4.1E+00	4.2E+00	4.7E+00	6.0E+00	9.5E+00	1.3E+01	1.8E+01	3.3E+01	4.8E+01	7.9E+01
20	1.2E+01	1.2E+01	1.2E+01	-1.2E+01.	1.3E+01	1.5E+01	2.0E+01	2.8E+01	3.8E+01	7.1E+01	1.0E+02	1.6E+02
	= 0.5 m										-	
Stack Height (m)	30	20	20	100	200	300	200	700	1000	2000	3000	2000
2.	6.5E-01	9.3E-01	1.4E+00	1.8E+00	3.0E+00	4.4E+00	7.2E+00	9.2E+00	1.3E+01	1.5E+01	2.0E+01	3.4E+01
9	1.4E+00	1.4E+00	1.6E+00	2.1E+00	3.9E+00	5.4E+00	8.3E+00	1.0E+01	1.3E+01	1.7E+01	2.3E+01	3.8E+01
20	3.7E+00	3.7E+00	3.7E+00	3.9E+00	4.9E+00	6.5E+00	8.5E+00	1.0E+01	1.3E+01	2.2E+01	3.2E+01	5.5E+01
30	5.5E+00	5.5E+00	5.5E+00	5.5E+00	5.6E+00	6.7E+00	1.0E+01	1.4E+01	1.9E+01	3.4E+01	4.9E+01	8.1E+01
50		1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.5E+01	2.1E+01	2.8E+01	3.9E+01	7.2E+01	1.0E+02	1.6E+02
Stack Diameter =	= 1.0 m				-							
Stack Height (m)	30	20	70	100	200	300	200	200	1000	2000	3000	2000
10	3.2E+00	3.6E+00	4.0E+00	5.4E+00	9.6E+00	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	5.3E+01	6.5E+01
20	5.9E+00	5.9E+00	5.9E+00	6.1E+00	9.6E+00	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	5.3E+01	7.5E+01
90	1.05+01	1.0E+01	1.0E+01	1.0E+01	1.2E+01	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	6.1E+01	9.3E+01
50	1.8E+01	1.8E+01	1.8E+01	1.8E+01	1.8E+01	1.8E+01	2.3E+01	3.1E+01	4.2E+01	7.7E+01	1.1E+02	1.7E+02
02	7.4E+01	7.4E+01	7.4E+01	7.4E+01	7.4E+01	7.4E+01	8.0E+01	1.0E+02	1.4E+02	2.1E+02	2.7E+02	4.0E+02
Stack Diameter :	= 1.5 m											
Stack Height (m)	30	20	20	100	200	300	200	700	1000	2000	3000	2000
10	4.1E+00	5.3E+00	6.4E+00	7.9E+00	1.3E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.1E+02
20	7.6E+00	7.6E+00	7.6E+00	7.9E+00	1.3E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.2E+02
30	1.3E+01	1.3E+01	1.3E+01	1.3E+01	1.6E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.2E+02
20	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.7E+01	3.6E+01	4.8E+01	8.6E+01	1.2E+02	1.8E+02
20	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.1E+02	1.4E+02	1.8E+02	3.0E+02	4.0E+02	5.8E+02
Stack Diameter:	= 2.0 m					,						
Stack Height (m)	30	20	70	100	700	300	500	200	1000	2000	3000	2000
10	5.0E+00	6.3E+00	7.7E+00	9.8E+00	1.7E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.6E+02
20	9.3E+00	9.3E+00	9.4E+00	1.0E+01	1.7E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.8E+02
30	1.6E+01	1.6E+01	1.6E+01	1.6E+01	1.9E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.8E+02
20	2.9E+01	2.9E+01	2.9E+01	2.9E+01	2.9E+01	2.9E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	2.0E+02
0/	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.8E+02	2.3E+02	3.4E+02	4.3E+02	6.4E+02
100	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.5E+02	5.2E+02	6.8E+02	8.2E+02
Stack Diameter	= 3.0 m											
Stack Height (m)	30	20	2	100	200	90	200	200	1000	2000	3000	2000
9	6.5E+00	6.9E+00	7.7E+00	9.8E+00	2.2E+01	3.4E+01	5.4E+01	7.4E+01	9.8E+01	1.3E+02	1.6E+02	1.6E+02
80	1.6E+01	1.6E+01	1.7E+01	2.0E+01	2.5E+01	3.7E+01	5.6E+01	7.4E+01	9.8E+01	1.5E+02	2.1E+02	3.0E+02
30	2.0E+01	2.0E+01	2.0E+01	2.0E+01	2.5E+01	3.7E+01	5.6E+01	7.4E+01	9.8E+01	1.7E+02	2.2E+02	3.0E+02
20	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.4E+01	5.1E+01	5.6E+01	7.4E+01	9.8E+01	1.7E+02	2.2E+02	3.0E+02
92	2.3E+02	2.3E+02	2.3E+02	2.3E+02	2.3E+02	2.4E+02	2.4E+02	2.9E+02	3.6E+02	4.1E+02	5.0E+02	7.0E+02
100	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.9E+02	6.3E+02	7.5E+02	8.7E+02
Stack Diameter	= 4.0 m			-								
Stack Height (m)	30	သ	2	100	200	300	200	200	1000	2000	3000	2000
30	2.5E+01	2.5E+01	2.5E+01	2.5E+01	3.4E+01	5.6E+01	8.1E+01	1.1E+02	1.4E+02	2.2E+02	2.8E+02	4.3E+02
20	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.3E+01	6.2E+01	8.1E+01	1.1E+02	1.4E+02	2.4E+02	3.1E+02	4.4E+02
70	2.6E+02	2.6E+02	2.6E+02	2.6E+02	2.7E+02	2.8E+02	3.3E+02	4.6E+02	4.8E+02	5.0E+02	5.7E+02	7.7E+02
100	5 7E+02	5.7E+02	5.7E+02	5.7E+02	5 75402	5 7E±02	5 7E±02	E 75100	20110	00.100		1

Stack Diameter = 0.3 m Stack height (m) 5	-					42 440	wer hanndary	(
Stack height (m) 5					NIM	Distance to property boundary (m.	ITY DOUBLIALY	(E)				
5	30	05	01.	100	000	000	905	001	4000	0000	0000	
10	1.3E-01	1.8E-01	2.5F-01	3.7F-01	400 6 4E-01	300 8 9E-01	1 45+00	00/100	1000	2 75-00	3000	5000
2	3.8E-01	3.8E-01	4.4E-01	6.1E-01	6.4E-01	8 9F-01	1.45.00	2.0E+00	3.1E+00	7.7E+00	1.35+01	2 65101
20	1.1E+00	1.1E+00	1.1E+00	1.2E+00	1.2E+00	1.5E+00	2.3E+00	3.48+00	5.7E+00	1.7E+00	2.0F±01	3 9F+01
30	2.4E+00	2.4E+00	2.4E+00	2.4E+00	2.7E+00	3.5E+00	4.2E+00	\$ 2E+00	7.0E+00	1 5F+01	2 6F±01	4 9F±01
50	7.7E+00	7.7E+00	7.7E+00	7.7E+00	7.7E+00	8.6E+00	8.6E+00	8.6E+00	8 6F+00	2.0E+01	3.4F+01	6 5R+01
Stack Diameter = 0.5 m										10.70.		10.000
Stack height (m)	30	50	70	100	200	300	200	700	1000	2000	3000	2000
5	1.8E-01	2.6E-01	3.5E-01	5.6E-01	1.4E+00	1.6E+00	2.3E+00	3.4E+00	5.2E+00	9.6E+00	1.5E+01	2.8E+01
10	5.3E-01	5.3E-01	6.1E-01	8.5E-01	1.4E+00	1.6E+00	2.3E+00	3.4E+00	5.2E+00	9.6E+00	1.5E+01	2.8E+01
20	1.5E+00	1.5E+00	1.5E+00	1.5E+00	1.5E+00	1.6E+00	2.3E+00	3,4E+00	5.2E+00	1.2E+01	2.0E+01	3.9E+01
30	2.9E+00	2.9E+00	2.9E+00	2.9E+00	2.9E+00	3.5E+00	4.2E+00	5.5E+00	8.1E+00	1.7E+01	2.8E+01	5.2E+01
50	8.0E+00	8.0E+00	8.0E+00	8.0E+00	8.0E+00	8.8E+00	1.2E+01	1.2E+01	1.2E+01	2.3E+01	3.7E+01	6.9E+01
Stack Diameter = 1.0 m	1											
Stack height (m)	30	50	70	100	200	300	200	700	1000	2000	3000	2000
01	9.7E-01	9.7E-01	1.1E+00	1.7E+00	3.7E+00	3.7E+00	4.2E+00	5.5E+00	7.5E+00	1.5E+01	2.3E+01	4.1E+01
20	2.7E+00	2.7E+00	2.7E+00	3.0E+00	3.7E+00	3.7E+00	4.2E+00	5.5E+00	7.5E+00	1.5E+01	2.3E+01	4.3E+01
06	4.35+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	5.5E+00	8.1E+00	1.7E+01	2.8E+01	5.2E+01
06	9.5E+00	9.5E+00	9.5E+00	9.5E+00	9.5E+00	9.5E+00	1.2E+01	1.4E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
Stack Diamotor = 1 5 m		4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.1E+01	4.1E+01	4.1E+01	5.8E+01	· 9.8E+01
Stack height (m)	30	05	7.0	100	000	000	003	002	4000	0000	0000	0001
10	2.0E+00	2.0E+00	2 3F±00	3.4F±00	5 15+00	300 0 E O E	200)00/ 00/ 00/ 00/	1000	105.01	3000	2000
20	3.5E+00	3.5E+00	3.5E+00	3.9E+00	5 1E+00	6.0E+00	6.0E+00	6.0E100	9.35+00	1.25+01	3.0E+01	5.4ET01
30	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.6E+00	9.3E+00	1.9E+01	3.0E+01	5.5E+01
20	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.2E+01	1.4E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
70	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	6.2E+01	7.8E+01	1.2E+02
Stack Diameter = 2.0 m												
Stack height (m)	30	50	70	100	200	300	200	700	1000	2000	3000	2000
10	2.6E+00	2.6E+00	3.0E+00	4.2E+00	6.3E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
20	4.2E+00	4.2E+00	4.2E+00	4.7E+00	6.3E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
30	8.4E+00	8.4E+00	8.4E+00	8.4E+00	9.2E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
00 00	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.5E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
100	3.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	7.0E+01	1.0E+02	1.5E+02
Stack Diameter = 3.0 m		8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	1.1E+02	1.7E+02
Stack height (m)	30	20	20	00,	900	000						
10	3.3E+00	3.4E+00	3.9E+00	5.5E+00	1 1F+01	300 1 7F±01	300 1 7F+01	1 78401	1 75+01	3 35401	3000	2000
20	6.5E+00	6.5E+00	6.5E+00	7.6E+00	1.1E+01	1.7E+01	1.7F+01	1.7F+01	1 78+01	3 38+01	5.0E+01	8 6FH01
30	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.2E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
50	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
70	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.5E+01	1.2E+02	1.9E+02
100	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.9E+02	2.4E+02
Stack Diameter = 4.0 m	200	9		00,								
30	1 25101	1 25 01	1,75,61	100	200	300	500	200	1000	2000	3000	2000
20	2.18401	1.3E+01	7 15+01	7 155+01	1.58+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	4.0E+01	6.0E+01	9.8E+01
70	1.1E+02	1.1E+02	1 18+02	1 18+02	1 18402	1 15+01	1 15+01	2.1E+01	2.15+01	1.15.02	6.0E+01	9.8E+01
100	1 \$E±02	1 5B+02	1 SEL02	1 50.00	1.12.02	1.15-02	1.15-102	1.15+02	1.15+02	1.15+02	1.35+02	2.3E+02

		lable 3	of §63.1215:	- 1	TION AVEINGE HOTE HUIVAIEIN EIIISSION RATES (IDINT)-FIAT LEFTAIN	10110	,						
30 50 70 100 200 3.9E+00 5.1E+00 7.6E+00 9.6E+00 1.6E+01 1.6E+01 1.6E+01 1.6E+01 1.6E+01 1.6E+01 2.0E+01 2.2E+01 2.6E+01 3.6E+01 3.6E+02 1.6E+02 1.7E+02 1.	ack Diameter =	0.3 m				Distano	e to prop	rty bound	ary (m)				
3.9E+00 5.1E+00 7.0E+00 9.0E+00 1.1E+01 1.4E+01 2.0E+01 3.7E+00 9.8E+00 1.1E+01 1.4E+01 2.0E+01 2.0E+01 3.7E+01 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 1.2E+02 1.2E+02 3.0E+01 3.9E+01 3.9E+01 3.9E+01 3.2E+01 3.2E+01 1.3E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.3E+02 1.3E+01 3.0E+01 3.0E+01 3.0E+01 3.0E+01 1.3E+02 1.3E+02 1.3E+02 1.3E+02 1.3E+02 1.3E+02 3.0E+01 5.2E+01 5.2E+01 5.2E+01 5.0E+01 5.0E+01 3.0E+01 3.0E+01 5.0E+02 7.0E+02 7.0E+02 7.0E+02 1.7E+02 1.7E+02 1.7E+02 1.7E+02 1.7E+02 1.7E+02 2.2E+01 5.0E+01 7.0E+02 7.0E+02 7.0E+02 7.0E+02 7.0E+02	tack Height (m)	ဆ	20	02	100	200	300	500	700	1000	2000	3000	2002
87E+00 98E+00 1.1E+01 1.4E+01 2.0E+01 4.4E+01 1.3E+01 1.3E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 3.0E+01 3.0E+01 1.00 200 200 200 200 6.9E+00 9.8E+00 1.5E+01 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.3E+01 1.3E+01 1.5E+01 2.0E+01 3.0E+01 3.0E+02 3.0E+02 3.0E+02 3.0E+02 3.0E+02	. 5	3.9E+00	5.1E+00	7.6E+00	9.6E+00	1.6E+01	2.4E+01	4.3E+01	5.3E+01	6.2E+01	1.1E+02	1.7E+02	3 1F+02
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9.5 m	20		1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.4E+02	1.9E+02	2.6E+02	3.6E+02	6.7E+02	9 7F+02	1.5F+03
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3.5E+01 3.5E+01 3.5E+01 3.5E+01 3.5E+01 4.6E+01 5.2E+01 5.2E+01 5.2E+01 5.2E+01 5.2E+01 5.2E+01 5.2E+01 = 1.3E+02 1.3E+02 1.3E+02 1.3E+02 1.3E+02 1.3E+02 = 1.0 m 30 50 70 100 200 3.0E+01 3.6E+01 5.6E+01 5.6E+01 9.6E+01 9.0E+01 9.6E+01 9.6E+01 9.6E+01 9.6E+01 9.0E+01 9.0E+01 1.0E+02 1.7E+02 1.7E+02 1.7E+02 1.7E+02 3.0E+01 5.0E+01 5.0E+01 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.2E+02 2.0E+03 3.0E+03 3.0E+03 3.0E+03 3.0E+03 <	- 10	1.3E+01	1.4E+01	1.5E+01	2.0E+01	3.7E+01	5.1E+01	7.9E+01	9.7E+01	1.2E+02	1.6E+02	2.2E+02	3.6E+02
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7.1E+01 7.1E+01 7.2E+02 7.2E+02 1.2E+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 3.2E+02 3.6E+02 9.6E+02 9.6E+02 9.6E+02 9.6E+02 9.6E+02 9.6E+02 9.6E+02 3.0E+03 1.2E+02 1.2E+02 <t< td=""><td>10</td><td>3.9E+01</td><td>5.0E+01</td><td>6.1E+01</td><td>7.5E+01</td><td>1.2E+02</td><td>2.0E+02</td><td>2.5E+02</td><td>3.4E+02</td><td>4.6E+02</td><td>7.2E+02</td><td>8.6E+02</td><td>1.0E+03</td></t<>	10	3.9E+01	5.0E+01	6.1E+01	7.5E+01	1.2E+02	2.0E+02	2.5E+02	3.4E+02	4.6E+02	7.2E+02	8.6E+02	1.0E+03
1.2E+02 1.2E+02 1.2E+02 1.2E+02 1.5E+02 2.2E+02 3.0E+02 3.0E+03 3.0E	20	7.1E+01	7.1E+01	7.2E+01	7.5E+01	1.2E+02	2.0E+02	2.5E+02	3.4E+02	4.6E+02	7.2E+02	8.6E+02	1.1E+03
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3.0 m 50 70 100 200 4.7E+01 6.0E+01 7.3E+01 9.2E+01 1.7E+02 8.8E+01 8.8E+01 9.4E+01 1.7E+02 1.5E+02 1.5E+02 1.5E+02 1.8E+02 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 3.0 50 70 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+02 3.0 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 3.0 50 70 4.0E+02	02	9.6E+02	9.6E+02	9.6E+02	9.6E+02	9.6E+02	9.6E+02	1.0E+03	1.3E+03	1.7E+03	2.9E+03	3.8E+03	5.5E+03
30 50 70 100 200 4.7E+01 6.0E+01 7.3E+01 9.2E+01 1.7E+02 8.8E+01 8.8E+01 8.8E+01 1.7E+02 1.7E+02 1.5E+02 1.5E+02 1.5E+02 1.8E+02 1.8E+02 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.0E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.0E+01 1.3E+02 1.3E+03 1.3E+03 1.3E+03 1.5E+02 1.5E+02 1.9E+02 2.4E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+02 3.0E+02 2.4E+02 2.4E+02 3.2E+02 2.4E+03 2.4E+03 2.4E+03 <td>ack Diameter =</td> <td>. 2.0 m</td> <td></td>	ack Diameter =	. 2.0 m											
4.7E+01 6.0E+01 7.3E+01 9.2E+01 1.7E+02 8.8E+01 8.8E+01 9.4E+01 1.7E+02 1.5E+02 1.5E+02 1.5E+02 1.8E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 3.0 50 70 1.0E+02 2.4E+02 1.5E+02 1.5E+02 1.9E+02 2.4E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 3.2E+03 3.3E+03 3.3E+03 3.3E+03 3.2E+03 3.3E+03 3.3E+03 3.2E+03 3.2E+03 2.4E+03 2.4E+03 2.4E+03 2.6E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03<	tack Height (m)	8	20	2	100	200	300	200	002	1000	2000	3000	2000
8 8E+01 8 8E+01 8 8E+01 9 4E+01 1.7E+02 1.5E+02 1.5E+02 1.5E+02 1.5E+02 1.8E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 2.8E+03 3.0 m 50 70 100 200 6.2E+01 6.5E+01 7.3E+01 2.4E+02 2.4E+02 1.5E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 1.5E+02 1.9E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.2E+02 3.3E+03 3.3E+03 3.3E+03 3.2E+02 4.8E+02 2.3E+02 2.4E+02 3.2E+02 2.4E+03 2.4E+03 2.4E+03 2.5E+03 3.0E+03 2.4E+03 2.4E+03 2.5E+03 3.2E+03 2.4E+03 2.4E+03<	9	4.7E+01	6.0E+01	7.3E+01	9.2E+01	1.7E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.5E+03
15E+02 1.5E+02 1.5E+02 1.5E+02 1.8E+02 1.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+02 2.7E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.8E+03 2.8E+	20	8.8E+01	8.8E+01	8.8E+01	9.4E+01	1.7E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.7E+03
2.7E+02 1.3E+03 2.8E+03 2.8E+02 2.4E+02 2.4E+02 2.4E+02 2.2E+03 2.2E+03 <t< td=""><td>30</td><td>1.5E+02</td><td>1.5E+02</td><td>1.5E+02</td><td>1.5E+02</td><td>1.8E+02</td><td>2.6E+02</td><td>3.2E+02</td><td>4.2E+02</td><td>5.6E+02</td><td>9.7E+02</td><td>1.3E+03</td><td>1.7E+03</td></t<>	30	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.8E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.7E+03
1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 1.3E+03 2.8E+03 2.8E	20	2.7E+02	2.7E+02	2.7E+02	2.7E+02	2.7E+02	2.7E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.9E+03
2.8E+03 2.8E+02 2.8E+03 2.8E+03 <t< td=""><td>20</td><td>1.3E+03</td><td>1.3E+03</td><td>1.3E+03</td><td>1.3E+03</td><td>1.3E+03</td><td>1.3E+03</td><td>1.4E+03</td><td>1.7E+03</td><td>2.2E+03</td><td>3.2E+03</td><td>4.1E+03</td><td>5.9E+03</td></t<>	20	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.4E+03	1.7E+03	2.2E+03	3.2E+03	4.1E+03	5.9E+03
3.0 m 50 70 100 200 6.2E+01 6.5E+01 7.3E+01 9.2E+01 2.1E+02 1.5E+02 1.5E+02 1.6E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 4.0E+02 4.0E+02 4.0E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.0 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 2.3E+02 2.3E+02 2.4E+02 3.2E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03		2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	3.3E+03	5.0E+03	6.5E+03	7.7E+03
30 50 70 100 200 6.2E+01 6.5E+01 7.3E+01 9.2E+01 2.1E+02 1.5E+02 1.5E+02 1.6E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 4.0E+02 4.0E+02 4.0E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.0 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 2.6E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03		3.0 m					į.	-					
6.2E+01 6.5E+01 7.3E+01 9.2E+01 2.1E+02 1.5E+02 1.5E+02 1.5E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 2.3E+02 2.3E+03 2.4E+03 2.4E	tack Height (m)	8	20	20	100	200	300	200	700	1000	2000	3000	2000
1.5E+02 1.5E+02 1.6E+02 1.9E+02 2.4E+02 1.9E+02 1.9E+02 1.9E+02 2.4E+02 4.0E+02 4.0E+02 1.9E+02 2.4E+02 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.0 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.6E+03 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	10	6.2E+01	6.5E+01	7.3E+01	9.2E+01	2.1E+02	3.3E+02	5.1E+02	7.0E+02	9.3E+02	1.2E+03	1.5E+03	1.5E+03
1.9E+02 1.9E+02 1.9E+02 2.4E+02 4.0E+02 4.0E+02 4.0E+02 4.2E+03 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.0 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 2.3E+02 2.4E+02 3.2E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	20	1.5E+02	1.5E+02	1.6E+02	1.9E+02	2.4E+02	3.5E+02	5.3E+02	7.0E+02	9.3E+02	1.4E+03	2.0E+03	2.8E+03
4.0E+02 4.0E+02 4.0E+02 4.0E+02 4.2E+03 2.2E+03 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 = 4.0 m 50 70 100 200 2.3E+02 2.3E+02 2.3E+02 3.2E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	30	1.9E+02	1.9E+02	1.9E+02	1.9E+02	2.4E+02	3.5E+02	5.3E+02	7.0E+02	9.3E+02	1.6E+03	2.1E+03	2.8E+03
2.2E+03 2.2E+03 2.2E+03 2.2E+03 2.2E+03 2.2E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 30 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.5E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	જ	4.0E+02	4.0E+02	4.0E+02	4.0E+02	4.2E+02	4.8E+02	5.3E+02	7.0E+02	9.3E+02	1.6E+03	2.1E+03	2.8E+03
3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 3.3E+03 30 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	20	2.2E+03	2.2E+03	2.2E+03	2.2E+03	2.2E+03	2.3E+03	2.3E+03	2.8E+03	3.4E+03	3.9E+03	4.7E+03	6.6E+03
30 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.5E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	100	~ ി	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.7E+03	6.0E+03	7.1E+03	8.2E+03
30 50 70 100 200 2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.6E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	ack Diameter =	0					,						
2.3E+02 2.3E+02 2.4E+02 3.2E+02 4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	stack Height (m)	8	20	20	ş	200	300	200	200	1000	2000	3000	2000
4.8E+02 4.8E+02 4.8E+02 5.0E+02 2.4E+03 2.4E+03 2.4E+03 2.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	30	2.3E+02	2.3E+02	2.3E+02	2.4E+02	3.2E+02	5.3E+02	7.7E+02	1.0E+03	1.3E+03	2.1E+03	2.6E+03	4.1E+03
2.4E+03 2.4E+03 2.4E+03 2.5E+03 2.5E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	20	4.8E+02	4.8E+02	4.8E+02	4.8E+02	5.0E+02	5.8E+02	7.7E+02	1.0E+03	1.3E+03	2.3E+03	3.0E+03	4.2E+03
5.4E+03 5.4E+03 5.4E+03 5.4E+03 5.4E+03	20	2.4E+03	2.4E+03	2.4E+03	2.4E+03	2.5E+03	2.6E+03	3.2E+03	4.3E+03	4.5E+03	4.7E+03	5.4E+03	7.2E+03
	100	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.5E+03	8.1E+03	8.8E+03	1.0E+04

lable 4 of §	of §63.1215:	- 1	1-110ul Average noi-Equivalent Ennission Rate Limits (10/111)Simple Elevated Lerrain	1 2 1			4.4.					
	= 0.3 m				Distall	Distance to property boundary (m)	niy bound	ary (III)				
Stack Height (m)	30	20	02	100	200	300	200	200	1000	2000	3000	2000
S	1.4E+00	1.9E+00	2.6E+00	3.8E+00	6.8E+00	9.4E+00	1.5E+01	2.1E+01	3.3E+01	8.1E+01	1.4E+02	2.7E+02
9	4.0E+00	4.0E+00	4.6E+00	6.4E+00	6.8E+00	9.4E+00	1.5E+01	2.1E+01	3.3E+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	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.5E+01	3.3E+01	4.4E+01	5.5E+01	7.3E+01	1.6E+02	2.7E+02	5.2E+02
	7.3E+01	7.3E+01	7.3E+01	7.3E+01	7.3E+01	8.3E+01	9.0E+01	9.0E+01	9.0E+01	2.1E+02	3.5E+02	6.8E+02
Stack Diameter =	= 0.5 m		i					ļ				
Stack Height (M)	25	00	0/	100	200	300	200	200	1000	2000	3000	2000
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	5.6E+00	5.6E+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	1.7E+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	5.8E+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	1.3E+02	2.4E+02	3.9E+02	7.2E+02
Stack Diameter =	1.0 m											
Stack Height (m)	30	20	70	100	200	300	200	700	1000	2000	3000	2000
10	1.0E+01	1.0E+01.	1.2E+01	1.7E+01	3.9E+01	3.9E+01	4.5E+01	5.8E+01	7.9E+01	1.6E+02	2.4E+02	4.4E+02
20	2.6E+01	2.6E+01	2:6E+01	2.8E+01	3.9E+01	3.9E+01	4.5E+01	5.8E+01	7.9E+01	1.6E+02	2.4E+02	4.5E+02
30	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.5E+01	5.8E+01	8.5E+01	1.8E+02	2.9E+02	5.5E+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
	3.8E+02	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
	= 1.5 m						-					
Stack Height (m)	30	20	20	100	200	300	200	200	1000	2000	3000	2000
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	5.8E+02
	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	3.3E+02	5.0E+02	8.7E+02
02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	6.5E+02	8.2E+02	1.3E+03
	: 2.0 m											
Stack Height (m)	8	20	70	100	200	300	200	700	1000	2000	3000	2000
10	2.7E+01	2.7E+01	3.2E+01	4.4E+01	6.6E+01	9.7E+01	9.7E+01	1.1E+02	1.5E+02	2.6E+02	3.9E+02	6.6E+02
70	4.0E+01	4.0E+01	4.0E+01	4.4E+01	6.6E+01	9.7E+01	9.7E+01	1.1E+02	1.5E+02	2.6E+02	3.9E+02	6.6E+02
8	7.9E+01	7.9E+01	7.9E+01	7.9E+01	9.1E+01	9.7E+01	9.7E+01	1.1E+02	1.5E+02	2.6E+02	3.9E+02	6.6E+02
20	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	5.6E+02	5.6E+02	5.6E+02	5.6E+02	5.6E+02	5.6E+02	5.6E+02	5.6E+02	5.6E+02	7.3E+02	1.1E+03	1.5E+03
	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	8.6E+02	1.2E+03	1.7E+03
	= 3.0 m											
Stack Height (m)	8	20	20	100	200	300	200	700	1000	2000	3000	2000
10	3.5E+01	3.5E+01	4.1E+01	5.8E+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
70	6.2E+01	6.2E+01	6.2E+01	7.2E+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
8	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.2E+02	1.6E+02	1.8E+02	1.8E+02	1.8E+02	3.5E+02	5.2E+02	9.0E+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	1.8E+02	3.5E+02	5.2E+02	9.0E+02
	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+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	2.6E+03
Stack Diameter =	6.				-		-					
Stack Height (m)	30	20	20	100	200	300	200	200	1000	2000	3000	2000
90	1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.4E+02	2.0E+02	2.2E+02	2.2E+02	2.2E+02	4.2E+02	6.3E+02	1.0E+03
20	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	4.2E+02	6.3E+02	1.0E+03
02	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	1.6E+03	2.4E+03
301	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	3.6E+03

■ 17. Section 63.1216 and an undesignated center heading are added to subpart EEE to read as follows:

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 emissions in excess of the limits provided by paragraph (a)(5) of this section;
- (2) Mercury in excess of 11 $\mu g/dscm$ 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 µg/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 μg/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

(2) Mercury in excess of 11 μg/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 μg/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 µg/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

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

 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 µg/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 µg/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 µg/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 ug/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.
- 18. Section 63.1217 is added to read as follows:

§ 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 equipped with a dry air pollution control system; or
- (ii) Either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (a)(5) of this section for sources not equipped with a dry air pollution control system;
- (iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this emission limit;
- (2) For mercury, except as provided for in paragraph (a)(2)(iii) of this section:
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 19 μg/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;
- (ii) When you burn hazardous waste with an as-fired heating value 10,000 Btu/lb or greater, emissions in excess of 4.2×10^{-5} lbs mercury attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;
- (iii) The boiler operated by Diversified Scientific Services, Inc. with EPA identification number TND982109142, and which burns radioactive waste mixed with hazardous waste, must comply with the mercury emission standard under § 63.1219(a)(2);

- (3) For cadmium and lead combined, except for an area source as defined under § 63.2,
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 150 μg/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;
- (ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 8.2×10^{-5} lbs combined cadmium and lead emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;
- (4) For chromium, except for an area source as defined under § 63.2:
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of $370 \mu g/dscm$, corrected to 7 percent oxygen:
- (ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.3×10^{-4} lbs chromium emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste;
- (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, except for an area source as defined under § 63.2:
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 31 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾)

equivalent, dry basis and corrected to 7 percent oxygen;

- (ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 5.08×10^{-2} lbs combined emissions of hydrogen chloride and chlorine gas attributable to the hazardous waste per million Btu heat input from the hazardous waste:
- (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 80 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)(i) Dioxins and furans in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for liquid fuel boilers equipped with a dry air pollution control system; or
- (ii) Either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (b)(5) of this section for sources not equipped with a dry air pollution control system;
- (iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this emission limit;
 - (2) For mercury:
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 6.8 µg/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;
- (ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.2×10^{-6} lbs mercury emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;
- (3) For cadmium and lead combined, except for an area source as defined under § 63.2:
- (i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 78 μg/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;
- (ii) When you burn hazardous waste with an as-fired heating value greater than or equal to 10,000 Btu/lb, emissions in excess of 6.2×10^{-6} lbs combined cadmium and lead emissions attributable to the hazardous waste per

million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;

(4) For chromium, except for an area source as defined under § 63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 12 μg/dscm, corrected to 7 percent oxygen;

- (ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.4×10^{-5} lbs chromium emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste:
- (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, except for an area source as

defined under § 63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 31 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 5.08×10^{-2} lbs combined emissions of hydrogen chloride and chlorine gas attributable to the hazardous waste per million Btu heat input from the

hazardous waste;

(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 20 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: DRE = $[1 - (W_{out} \div W_{in})] \times 100\%$ 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 liquid fuel boilers. (i) When you burn hazardous waste with a heating value less than 10,000 Btu/lb:
- (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium, combined, in excess of 150 μ g/dscm, corrected to 7 percent oxygen; and

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel, combined, in excess of 370 µg/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with a heating value of 10,000 Btu/lb or

greater:

- (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain in excess of 8.2×10^{-5} lbs combined emissions of cadmium, lead, and selenium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain either in excess of 1.3×10^{-4} lbs combined emissions of antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel attributable to the hazardous waste per million Btu heat input from the hazardous waste;
- (3) Alternative metal emission control requirements for new liquid fuel boilers.
 (i) When you burn hazardous waste with a heating value less than 10,000 Rtu/lb.
- (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium, combined, in excess of 78 µg/dscm, corrected to 7 percent oxygen; and
- (B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel, combined, in excess of 12 μ g/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with a heating value greater than or equal to 10,000 Btu/lb:

- \tilde{A} You must not discharge or cause combustion gases to be emitted into the atmosphere that contain in excess of 6.2×10^{-6} lbs combined emissions of cadmium, lead, and selenium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (B) You must not discharge or cause combustion gases to be emitted into the

atmosphere that contain either in excess of 1.4×10^{-5} lbs combined emissions of antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(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 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.

mose ponutants.

■ 19. Section 63.1218 is added to read as follows:

§ 63.1218 What are the standards for hydrochloric acid production furnaces 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 emissions in excess of the limits provided by paragraph (a)(5) of this section;

(2) For mercury, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(3) For lead and cadmium, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(4) For arsenic, beryllium, and chromium, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(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 gas, either:

(i) Emission in excess of 150 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾ equivalent, dry basis and corrected to 7 percent oxygen; or

(ii) Emissions greater than the levels that would be emitted if the source is achieving a system removal efficiency (SRE) of less than 99.923 percent for total chlorine and chloride fed to the combustor. You must calculate SRE from the following equation:

SRE = [1 - (Cl $_{out}$ / Cl $_{in})] <math display="inline">\times\,100\%$ Where:

Cl in = mass feedrate of total chlorine or chloride in all feedstreams, reported as chloride; and

Cl out = mass emission rate of hydrogen chloride and chlorine gas, reported as chloride, in exhaust emissions prior to release to the atmosphere.

(7) For particulate matter, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section.

(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) For mercury, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section; (3) For lead and cadmium, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section;

(4) For arsenic, beryllium, and chromium, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section;

(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 gas, either:

(i) Emission in excess of 25 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾ equivalent, dry basis and corrected to 7 percent oxygen; or

(ii) Emissions greater than the levels that would be emitted if the source is achieving a system removal efficiency (SRE) of less than 99.987 percent for total chlorine and chloride fed to the combustor. You must calculate SRE from the following equation:

SRE = $[1 - (Cl_{out} / Cl_{in})] \times 100\%$ Where:

Cl in = mass feedrate of total chlorine or chloride in all feedstreams, reported as chloride; and

Cl out = mass emission rate of hydrogen chloride and chlorine gas, reported as chloride, in exhaust emissions prior to release to the atmosphere.

(7) For particulate matter, except for an area source as defined under § 63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this

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

Win = mass feedrate of one POHC in a waste feedstream; and

Wout = 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) 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.

■ 20. Section 63.1219 and a new undesignated center heading are added to subpart EEE to read as follows:

Replacement Emissions Standards and **Operating Limits for Incinerators,** Cement Kilns, and Lightweight Aggregate Kilns

§ 63.1219 What are the replacement 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) For incinerators equipped with either a waste heat boiler or dry air pollution control system, either:

(A) Emissions in excess of 0.20 ng TEQ/dscm, corrected to 7 percent

oxygen; or

(B) 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 matter control device is presumed to meet the 400°F or lower requirement);

(ii) Emissions in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for incinerators not equipped with either a waste heat boiler or dry air

pollution control system;

(iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this standard:

(2) Mercury in excess of 130 μg/dscm, corrected to 7 percent oxygen;

(3) Cadmium and lead in excess of 230 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 92 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

(6) Hydrogen chloride and chlorine gas (total chlorine) in excess of 32 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Except as provided by paragraph (e) of this section, particulate matter in excess of 0.013 gr/dscf 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)(i) Dioxins and furans in excess of 0.11 ng TEQ/dscm corrected to 7 percent oxygen for incinerators equipped with either a waste heat boiler or dry air pollution control system; or

(ii) Dioxins and furans in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen for sources not equipped with either a waste heat boiler or dry air

pollution control system;

- (iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this standard:
- (2) Mercury in excess of 8.1 μg/dscm, corrected to 7 percent oxygen;
- (3) Cadmium and lead in excess of 10 µg/dscm, combined emissions, corrected to 7 percent oxygen;
- (4) Arsenic, beryllium, and chromium in excess of 23 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) Hydrogen chloride and chlorine gas in excess of 21 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Except as provided by paragraph (e) of this section, particulate matter in excess of 0.0015 gr/dscf, 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 POHC in a waste feedstream; and

 $\begin{aligned} W_{\rm out} = \text{mass emission rate of the same} \\ \text{POHC present in exhaust emissions} \\ \text{prior to release to the atmosphere.} \end{aligned}$

(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 constituent (POHC). (i) You must treat each POHC 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 incinerators.
(i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 230 μg/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 92 µg/dscm, combined emissions, corrected to 7 percent oxygen.

(3) Alternative metal emission control requirements for new incinerators. (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 10 µg/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 23 µg/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.
- 21. Section 63.1220 is added to subpart EEE to read as follows:

§ 63.1220 What are the replacement standards for hazardous waste burning cement kilns?

- (a) Emission and hazardous waste feed limits for existing sources. You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:
 - (1) For dioxins and furans, either:
- (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) For mercury, both:

(i) An average as-fired concentration of mercury in all hazardous waste feedstreams in excess of 3.0 parts per million by weight; and

(ii) Emissions in excess of 120 μg/dscm, corrected to 7 percent oxygen; or

- (iii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 μg/dscm;
 - (3) For cadmium and lead, both:
- (i) Emissions in excess of 7.6×10^{-4} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of $330 \mu g/dscm$, combined emissions, corrected to 7 percent oxygen;
- (4) For arsenic, beryllium, and chromium, both:
- (i) Emissions in excess of 2.1×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of 56 $\mu g/$ 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 bypass 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 bypass 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 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)(A) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by $\S63.1206(b)(7)$, hydrocarbons in the main stack do not exceed 20 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.

(6) Hydrogen chloride and chlorine gas in excess of 120 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis, corrected to 7 percent oxygen; and

(7) For particulate matter, both:

(i) Emissions in excess of 0.028 gr/dscf corrected to 7 percent oxygen; and

- (ii) Opacity greater than 20 percent, unless your source is equipped with a bag leak detection system under § 63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9).
- (b) Emission and hazardous waste feed limits for new sources. You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

(1) For dioxins and furans, either:

- (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) For mercury, both:

- (i) An average as-fired concentration of mercury in all hazardous waste feedstreams in excess of 1.9 parts per million by weight; and
- (ii) Emissions in excess of 120 μg/dscm, corrected to 7 percent oxygen; or
- (iii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 μg/dscm;

(3) For cadmium and lead, both:

- (i) Emissions in excess of 6.2×10^{-5} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of 180 μ g/dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

- (i) Emissions in excess of 1.5×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of 54 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, carbon monoxide and hydrocarbons emissions are limited in both the bypass duct or midkiln gas

- sampling system and the main stack as follows:
- (A) Emissions in the by-pass or midkiln gas sampling system are limited to either:
- (1) 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)(i)(A)(2) of this section, you also must 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

(2) 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; and

(B) Hydrocarbons in the main stack are limited, if construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(ii) For kilns not equipped with a bypass duct or midkiln gas sampling system, hydrocarbons and carbon monoxide are limited in the main stack

to either:

(A) Hydrocarbons not exceeding 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)(1) Carbon monoxide not exceeding 100 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

(2) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous

monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); and

(3) If construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, hydrocarbons are limited to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrogen chloride and chlorine gas in excess of 86 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, both:

(i) Emissions in excess of 0.0023 gr/dscf corrected to 7 percent oxygen; and

(ii) Opacity greater than 20 percent, unless your source is equipped with a bag leak detection system under § 63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9).

(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:

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

$$\begin{split} W_{\rm out} = & \text{ mass emission rate of the same} \\ & \text{POHC present in exhaust emissions} \\ & \text{prior to release to the atmosphere.} \end{split}$$

(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 constituent (POHC). (i) You must treat each POHC 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) Cement kilns with in-line kiln raw mills. (1) General. (i) You must conduct performance testing when the raw mill is on-line and when the mill is off-line to demonstrate compliance with the emission standards, and you must establish separate operating parameter limits under § 63.1209 for each mode of operation, except as provided by paragraphs (d)(1)(iv) and (d)(1)(v) of this section.

(ii) You must document in the operating record each time you change from one mode of operation to the alternate mode and begin complying with the operating parameter limits for that alternate mode of operation.

(iii) You must calculate rolling averages for operating parameter limits as provided by § 63.1209(q)(2).

(iv) If your in-line kiln raw mill has dual stacks, you may assume that the dioxin/furan emission levels in the bypass stack and the operating parameter limits determined during performance testing of the by-pass stack when the raw mill is off-line are the same as when the mill is on-line.

(v) In lieu of conducting a performance test to demonstrate compliance with the dioxin/furan emission standards for the mode of operation when the raw mill is on-line, you may specify in the performance test workplan and Notification of Compliance the same operating parameter limits required under § 63.1209(k) for the mode of operation when the raw mill is on-line as you establish during performance testing for the mode of operation when the raw mill is off-line.

(2) Emissions averaging. You may comply with the mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas emission standards on a time-weighted average basis under the following procedures:

(i) Averaging methodology. You must calculate the time-weighted average emission concentration with the following equation:

$$\begin{split} C_{total} &= \left\{ C_{mill-off} \times \left(T_{mill-off} / \left(T_{mill-off} + T_{mill-on} \right) \right) \right\} + \left\{ C_{mill-on} \times \left(T_{mill-on} / \left(T_{mill-off} + T_{mill-on} \right) \right) \right\} \end{split}$$

Where:

 C_{total} = time-weighted average concentration of a regulated constituent considering both raw mill on time and off time;

 $C_{mill-off}$ = average performance test concentration of regulated constituent with the raw mill off-line;

 $C_{mill-on}$ = average performance test concentration of regulated constituent with the raw mill online;

 $T_{mill-off}$ = time when kiln gases are not routed through the raw mill; and $T_{mill-on}$ = time when kiln gases are routed through the raw mill.

(ii) Compliance. (A) If you use this emission averaging provision, you must document in the operating record compliance with the emission standards on an annual basis by using the equation provided by paragraph (d)(2) of this section.

(B) Compliance is based on one-year block averages beginning on the day you submit the initial notification of compliance.

(iii) *Notification*. (A) If you elect to document compliance with one or more emission standards using this emission averaging provision, you must notify the Administrator in the initial comprehensive performance test plan submitted under § 63.1207(e).

(B) You must include historical raw mill operation data in the performance test plan to estimate future raw mill down-time and document in the performance test plan that estimated emissions and estimated raw mill down-time will not result in an exceedance of an emission standard on an annual basis.

(C) You must document in the notification of compliance submitted under § 63.1207(j) that an emission standard will not be exceeded based on the documented emissions from the performance test and predicted raw mill down-time.

(e) Preheater or preheater/precalciner kilns with dual stacks. (1) General. You must conduct performance testing on each stack to demonstrate compliance with the emission standards, and you must establish operating parameter limits under § 63.1209 for each stack, except as provided by paragraph (d)(1)(iv) of this section for dioxin/furan emissions testing and operating parameter limits for the by-pass stack of in-line raw mills.

(2) Emissions averaging. You may comply with the mercury, semivolatile metal, low volatile metal, and hydrogen

chloride/chlorine gas emission standards specified in this section on a gas flowrate-weighted average basis under the following procedures:

(i) Averaging methodology. You must calculate the gas flowrate-weighted average emission concentration using

the following equation:

 $C_{tot} = \{C_{main} \times (Q_{main} / (Q_{main} + Q_{bypass}))\}$ + $\{C_{bypass} \times (Q_{bypass} / (Q_{main} +$ $Q_{bypass}))$

Where:

 C_{tot} = gas flowrate-weighted average concentration of the regulated

 C_{main} = average performance test concentration demonstrated in the main stack;

 C_{bypass} = average performance test concentration demonstrated in the bypass stack;

Q_{main} = volumetric flowrate of main stack effluent gas; and

Q_{bypass} = volumetric flowrate of bypass effluent gas.

- (ii) Compliance. (A) You must demonstrate compliance with the emission standard(s) using the emission concentrations determined from the performance tests and the equation provided by paragraph (e)(1) of this section: and
- (B) You must develop operating parameter limits for bypass stack and main stack flowrates that ensure the emission concentrations calculated with the equation in paragraph (e)(1) of this section do not exceed the emission standards on a 12-hour rolling average basis. You must include these flowrate limits in the Notification of Compliance.

(iii) Notification. If you elect to document compliance under this emissions averaging provision, you

(A) Notify the Administrator in the initial comprehensive performance test plan submitted under § 63.1207(e). The performance test plan must include, at a minimum, information describing the flowrate limits established under paragraph (e)(2)(ii)(B) of this section; and

(B) Document in the Notification of Compliance submitted under § 63.1207(j) the demonstrated gas flowrate-weighted average emissions that you calculate with the equation provided by paragraph (e)(2) of this

(f) 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.

(g) [Reserved].

- (h) When you comply with the particulate matter requirements of paragraphs (a)(7) or (b)(7) of this section, you are exempt from the New Source Performance Standard for particulate matter and opacity under § 60.60 of this chapter.
- 22. Section 63.1221 is added to subpart EEE to read as follows:

§ 63.1221 What are the replacement standards for hazardous waste burning lightweight aggregate kilns?

- (a) Emission and hazardous waste feed limits for existing sources. You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:
- (1) For dioxins and furans, either: (i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent

oxygen; or

- (ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system that immediately follows the last combustion chamber) to 400°F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;
 - (2) For mercury, either:

(i) Emissions in excess of 120 μg/ dscm, corrected to 7 percent oxygen; or

(ii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 µg/dscm;

(3) For cadmium and lead, both:

- (i) Emissions in excess of 3.0×10^{-4} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of 250 μg/ dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

(i) In excess of 9.5×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(ii) Emissions in excess of 110 μg/ dscm, combined emissions, corrected to

7 percent oxygen;

(5) Carbon monoxide and hydrocarbons. (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 also must 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 20 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 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as

(6) Hydrogen chloride and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter emissions in excess of 0.025 gr/dscf, corrected to 7

percent oxygen.

- (b) Emission and hazardous waste feed limits for new sources. You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:
- (1) For dioxins and furans, either: (i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or
- (ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system that immediately follows the last combustion chamber) to 400°F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;
 - (2) For mercury, either:
- (i) Emissions in excess of 120 µg/ dscm, corrected to 7 percent oxygen; or
- (ii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 µg/dscm;
 - (3) For cadmium and lead, both:
- (i) Emissions in excess of 3.7×10^{-5} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- (ii) Emissions in excess of 43 μg/ dscm, combined emissions, corrected to 7 percent oxygen;
- (4) For arsenic, beryllium, and chromium, both:
- (i) In excess of 3.3×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(ii) Emissions in excess of 110 $\mu g/$ dscm, combined emissions, corrected to

7 percent oxygen;

(5) Carbon monoxide and hydrocarbons. (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 also must 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 20 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 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as

propane;

(6) Hydrogen chloride and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as a chloride (Cl⁽⁻⁾) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter emissions in excess of 0.0098 gr/dscf 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 principal organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

DRE = $[1 - (W_{out} / Win)] \times 100\%$ 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 destruction and removal efficiency (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-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 burn hazardous wastes F020, F021, F022, F023, F026, or F027.

- (3) Principal organic hazardous constituents (POHCs). (i) You must treat each POHC 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.

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

■ 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. Section 260.11 is amended by
- a. Revising the first sentence in paragraph (a).
- b. Revising paragraph (c)(1).

The revisions and additions read as follows:

§ 260.11 References.

(a) When used in parts 260 through 268 of this chapter, the following publications are incorporated by reference. * * *

* * * * * (c) * * *

(1) "APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, December 1981, IBR approved for §§ 264.1035 and 265.1035.

* * * * *

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

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

Authority: 42 U.S.C. 6905, 6912(a), 6924, 6925, 6927, 6928(h), and 6974.

■ 2. Section 264.340 is amended by revising the first sentence of paragraph (b)(1) and adding paragraph (b)(5) to read as follows:

§ 264.340 Applicability.

* * * * *

(b) * * * (1) Except as provided by paragraphs (b)(2) through (b)(5) of this section, the standards of this part do not apply to a new hazardous waste incineration unit that becomes subject to RCRA permit requirements after October 12, 2005; or no longer apply when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE, of this chapter.

(5) The particulate matter standard of § 264.343(c) remains in effect for incinerators that elect to comply with the alternative to the particulate matter standard of §§ 63.1206(b)(14) and 63.1219(e) of this chapter.

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

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

Authority: 42 U.S.C. 6905, 6906, 6912, 6922, 6923, 6924, 6925, 6935, 6936, and 6937.

■ 2. Section 265.340 is amended by revising paragraph (b)(1) to read as follows:

§ 265.340 Applicability.

* * * * * *

(b) * * * (1) Except as provided by paragraphs (b)(2) and (b)(3) of this section, the standards of this part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE, of this chapter.

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

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

Authority: 42 U.S.C. 1006, 2002(a), 3001–3009, 3014, 6905, 6906, 6912, 6921, 6922, 6924–6927, 6934, and 6937.

■ 2. Section 266.100 is amended by revising the first sentence of paragraph (b)(1) and adding paragraphs (b)(3) and (b)(4) to read as follows:

§ 266.100 Applicability.

(b) * * * (1) Except as provided by paragraphs (b)(2), (b)(3), and (b)(4) of this section, the standards of this part do not apply to a new hazardous waste boiler or industrial furnace unit that becomes subject to RCRA permit requirements after October 12, 2005; or no longer apply when an owner or operator of an existing hazardous waste boiler or industrial furnace unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of

(3) If you own or operate a boiler or hydrochloric acid production furnace that is an area source under § 63.2 of this chapter and you elect not to comply with the emission standards under §§ 63.1216, 63.1217, and 63.1218 of this chapter for particulate matter, semivolatile and low volatile metals, and total chlorine, you also remain subject to:

part 63, subpart EEE, of this chapter.

(i) Section 266.105—Standards to control particulate matter;

(ii) Section 266.106—Standards to control metals emissions, except for mercury; and (ii) Section 266.107—Standards to control hydrogen chloride and chlorine gas.

(4) The particulate matter standard of § 266.105 remains in effect for boilers that elect to comply with the alternative to the particulate matter standard under §§ 63.1216(e) and 63.1217(e) of this chapter.

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

■ 1. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6924, 6925, 6927, 6939, and 6974.

■ 2. Section 270.6 is revised to read as follows:

§ 270.6 References.

(a) When used in part 270 of this chapter, the following publications are incorporated by reference. These incorporations by reference were approved by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the Federal Register. Copies may be inspected at the Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., (3403T), Washington, DC 20460, libraryhq@epa.gov; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http:// www.archives.gov/federal_register/ code_of_federal_regulations/ ibr locations.html.

(b) The following materials are available for purchase from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 605–6000 or (800) 553–6847; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800:

(1) "APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, December 1981, IBR approved for §§ 270.24 and 270.25.

(2) [Reserved].

■ 3. Section 270.10 is amended by adding paragraph (l) to read as follows:

§ 270.10 General application requirements.

(l) If the Director concludes, based on one or more of the factors listed in paragraph (l)(1) of this section that

compliance with the standards of 40 CFR part 63, subpart EEE alone may not be protective of human health or the environment, the Director shall require the additional information or assessment(s) necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health and/or the environment resulting from both direct and indirect exposure pathways. The Director may also require a permittee or applicant to provide information necessary to determine whether such an assessment(s) should be required.

(1) The Director shall base the evaluation of whether compliance with the standards of 40 CFR part 63, subpart EEE alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following

factors:

(i) Particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;

(ii) Identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants considering enforceable controls in place to limit

those pollutants;

(iii) Identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities (confirmation of which should be made through emissions testing);

(iv) Identities and quantities of other off-site sources of pollutants in proximity of the facility that significantly influence interpretation of a facility-specific risk assessment;

(v) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;

(vi) Volume and types of wastes, for example wastes containing highly toxic constituents;

(vii) Other on-site sources of hazardous air pollutants that significantly influence interpretation of the risk posed by the operation of the source in question:

(viii) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk; and

(ix) Such other factors as may be appropriate.

(2) [Reserved]

■ 4. Section 270.19 is amended by revising paragraph (e) to reads as follows:

§ 270.19 Specific part B information requirements for incinerators.

* * * * *

- (e) When an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply, except those provisions the Director determines are necessary to ensure compliance with §§ 264.345(a) and 264.345(c) of this chapter if you elect to comply with § 270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3).
- 5. Section 270.22 is amended by revising the introductory text to read as follows:

§ 270.22 Specific part B information requirements for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by)conducting a comprehensive performance test and submitting a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply. The requirements of this section do apply, however, if the Director determines certain provisions are

necessary to ensure compliance with §§ 266.102(e)(1) and 266.102(e)(2)(iii) of this chapter if you elect to comply with § 270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if vou are an area source and elect to comply with the §§ 266.105, 266.106, and 266.107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3).

■ 6. Section 270.24 is amended by revising paragraph (d)(3) to read as follows:

§ 270.24 Specific part B information requirements for process vents.

* * * * * * * * * (d) * * *

(3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in § 270.6) or other engineering texts acceptable to the Regional Administrator that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in § 264.1035(b)(4)(iii).

■ 7. Section 270.25 is amended by revising paragraph (e)(3) to read as follows:

§ 270.25 Specific part B information requirements for equipment.

* * * * * * (e) * * *

(3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in § 270.6) or other engineering texts acceptable to the Regional Administrator that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in § 264.1035(b)(4)(iii).

■ 8. Section 270.32 is amended by adding paragraph (b)(3) to read as follows:

§ 270.32 Establishing permit conditions.

* * (b) * * *

(3) If, as the result of an assessment(s) or other information, the Administrator or Director determines that conditions are necessary in addition to those required under 40 CFR parts 63, subpart EEE, 264 or 266 to ensure protection of human health and the environment, he shall include those terms and conditions in a RCRA permit for a hazardous waste combustion unit.

■ 9. Section 270.42 is amended by:

■ a. Revising paragraph (j)(1).

- b. Redesignating paragraph (j)(2) as (j)(3).
- c. Adding new paragraph (j)(2).
- d. Adding new paragraph (k); and
- e. Adding a new entry 10 in numerical order in the table under section L of Appendix I.

The revisions and additions read as follows:

§ 270.42 Permit modification at the request of the permittee.

* * * * * * (j) * * *

(1) Facility owners or operators must have complied with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1210 that were in effect prior to October 11, 2000, (See 40 CFR part 63 §§ 63.1200–63.1499 revised as of July 1, 2000) in order to request a permit modification under this section for the purpose of technology changes needed to meet the standards under 40 CFR 63.1203, 63.1204, and 63.1205.

(2) Facility owners or operators must comply with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1210(b) and 63.1212(a) before a permit modification can be requested under this section for the purpose of technology changes needed to meet the 40 CFR 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221 standards promulgated on October 12, 2005.

(k) Waiver of RCRA permit conditions in support of transition to the part 63 MACT standards. (1) You may request to have specific RCRA operating and emissions limits waived by submitting a Class 1 permit modification request under Appendix I of this section, section L(10). You must:

(i) Identify the specific RCRA permit operating and emissions limits which you are requesting to waive;

(ii) Provide an explanation of why the changes are necessary in order to minimize or eliminate conflicts between the RCRA permit and MACT compliance; and

- (iii) Discuss how the revised provisions will be sufficiently protective.
- (iv) The Director shall approve or deny the request within 30 days of receipt of the request. The Director may, as his or her discretion, extend this 30 day deadline one time for up to 30 days by notifying the facility owner or operator.
- (2) To request this modification in conjunction with MACT performance testing where permit limits may only be waived during actual test events and pretesting, as defined under 40 CFR 63.1207(h)(2)(i) and (ii), for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Administrator) you must:
- (i) Submit your modification request to the Director at the same time you submit your test plans to the Administrator; and
- (ii) The Director may elect to approve or deny the request continent upon approval of the test plans.

Appendix I to § 270.42—Classification of Permit Modification

¹ Class 1 modifications requiring prior Agency approval.

■ 10. Section 270.62 is amended by revising the introductory text to read as follows:

§ 270.62 Hazardous waste incinerator permits.

When an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply, except those provisions the Director determines are necessary to ensure compliance with §§ 264.345(a) and 264.345(c) of this chapter if you elect to comply with § 270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3).

■ 11. Section 270.66 is amended by revising the introductory text to read as follows:

§ 270.66 Permits for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement kiln, lightweight aggregate kiln,

solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005 or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply. The requirements of this section do apply, however, if the Director determines certain provisions are necessary to ensure compliance with §§ 266.102(e)(1) and 266.102(e)(2)(iii) of this chapter if you elect to comply with § 270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if you are an area source and elect to comply with the §§ 266.105, 266.106, and 266.107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3).

■ 12. Section 270.235 is amended by:
■ a. Revising the section heading and paragraphs (a)(1) introductory text and (a)(2) introductory text.

- b. Revising paragraphs (b)(1) introductory text and (b)(2).
- c. Adding new paragraph (c). The revisions read as follows:

§ 270.235 Options for incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers and hydrochloric acid production furnaces to minimize emissions from startup, shutdown, and malfunction events.

(a) * * * (1) Revisions to permit conditions after documenting compliance with MACT. The owner or operator of a RCRA-permitted incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace may request that the Director address permit conditions that minimize emissions from startup, shutdown, and malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to §§ 264.340(b) and 266.100(b) of this chapter:

(2) Addressing permit conditions upon permit reissuance. The owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that has conducted a comprehensive performance test and submitted to the Administrator a Notification of Compliance documenting compliance with the standards of part 63, subpart EEE, of this chapter may request in the application to reissue the permit for the combustion unit that the Director control emissions from startup,

shutdown, and malfunction events under any of the following options:

(b) * * * (1) *Interim status* operations. In compliance with §§ 265.340 and 266.100(b), the owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of part 265 or 266 of this chapter may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance documenting compliance with the standards of part 63, subpart

(2) Operations under a subsequent RCRA permit. When an owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel

boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of parts 265 or 266 of this chapter submits a RCRA permit application, the owner or operator may request that the Director control emissions from startup, shutdown, and malfunction events under any of the options provided by paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(c) New units. Hazardous waste incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace units that become subject to RCRA permit requirements after October 12, 2005 must control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options:

(1) Comply with the requirements specified in § 63.1206(c)(2) of this chapter; or

(2) Request to include in the RCRA permit, conditions that ensure emissions of toxic compounds are

minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan and design. The director will specify that these permit conditions apply only when the facility is operating under its startup, shutdown, and malfunction plan.

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

■ 1. The authority citation for part 271 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), and 6926.

■ 2. Section 271.1(j) is amended by adding the following entries to Table 1 in chronological order by date of publication in the **Federal Register**, to read as follows:

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Promulgation date	Title of Reglation	Federal Register reference	Effective of	late
oct. 12, 2005	* * Standards for Hazardous lutants for Hazardous Combustors.	* ir Pol- [Insert FR page numbers] Waste	Oct. 12, 2005.	*

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EEE, of this chapter.