.0111 STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTE AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES - PART 266

(a) 40 CFR 266.20 through 266.23 (Subpart C), "Recyclable Materials Used in a Manner Constituting Disposal", are incorporated by reference including subsequent amendments and editions.

SUBPART C -- RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

266.20 Applicability.

(a) The regulations of this subpart apply to recyclable materials that are applied to or placed on the land:
  (1) Without mixing with any other substance(s); or
  (2) After mixing or combination with any other substance(s). These materials will be referred to throughout this subpart as "materials used in a manner that constitutes disposal."

(b) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in Subpart D of Part 268 (or applicable prohibition levels in §268.32 or RCRA section 3004(d), where no treatment standards have been established) for each recyclable material (i.e., hazardous waste) that they contain.

(c) Anti-skid/deicing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in paragraph (b) of this section and remain subject to regulation.

(d) Fertilizers that contain recyclable materials are not subject to regulation provided that:
  (1) They are zinc fertilizers excluded from the definition of solid waste according to §261.4(a)(21) of this chapter; or
  (2) They meet the applicable treatment standards in Subpart D of Part 268 of this chapter for each hazardous waste that they contain.

266.21 Standards applicable to generators and transporters of materials used in a manner that constitutes disposal.

Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of Parts 262 and 263 of this chapter, and the notification requirement under Section 3010 of RCRA.

266.22 Standards applicable to storers of materials that are to be used in a manner that constitutes disposal who are not the ultimate users.

Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of subparts A through L of parts 264, 265 and 267, and parts 270 and 124 of this chapter and the notification requirement under Section 3010 of RCRA.

266.23 Standards applicable to users of materials that are used in a manner that constitutes disposal.

(a) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of Subparts A through N of parts 124, 264, 265, 268, and 270 of this chapter and the notification requirement under section 3010 of RCRA. (These requirements do not apply to products which contain these recyclable materials under the provisions of §266.20(b) of this chapter.)

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

(b) 40 CFR 266.70 (Subpart F), "Recyclable Materials Utilized for Precious Metal Recovery", is incorporated by reference including subsequent amendments and editions. Off-site recycling facilities that receive materials described in 40 CFR 266.70(a) must manage the materials in accordance with and comply with 40 CFR 262.34(a) as incorporated by reference in 15A NCAC 13A .0107(c), excluding 262.34(a)(3). Each container and tank holding recyclable materials at off-site precious metal recycling facilities must be labeled or marked with the words, “Recyclable Material”.

SUBPART F - RECYCLABLE MATERIALS UTILIZED FOR PRECIOUS METAL RECOVERY

266.70 Applicability and requirements.

(a) The regulations of this subpart apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these.

(b) Persons who generate, transport, or store recyclable materials that are regulated under this subpart are subject to the following requirements:
   (1) Notification requirements under Section 3010 of RCRA;
   (2) Subpart B of Part 262 (for generators), §§263.20 and 263.21 (for transporters), and §§265.71 and 265.72 (for persons who store) of this chapter, and.
   (3) For precious metals exported to or imported from designated OECD member countries for recovery, subpart H of part 262 and §265.12(a)(2) of this chapter. For precious metals exported to or imported from non-OECD countries for recovery, subparts E and F of 40 CFR part 262.

(c) Persons who store recycled materials that are regulated under this subpart must keep the following records to document that they are not accumulating these materials speculatively (as defined in §261.1(c) of this chapter);
   (1) Records showing the volume of these materials stored at the beginning of the calendar year;
   (2) The amount of these materials generated or received during the calendar year; and
   (3) The amount of materials remaining at the end of the calendar year.

(d) Recyclable materials that are regulated under this subpart that are accumulated speculatively (as defined in §261.1(c) of this chapter) are subject to all applicable provisions of parts 262 through 265, 267, 270, and 124 of this chapter.

(c) 40 CFR 266.80 (Subpart G), "Spent Lead-Acid Batteries Being Reclaimed", is incorporated by reference including subsequent amendments and editions.

SUBPART G -- SPENT LEAD-ACID BATTERIES BEING RECLAIMED

266.80 Applicability and requirements.

(a) Are spent lead-acid batteries exempt from hazardous waste management requirements? If you generate, collect, transport, store, or regenerate lead-acid batteries for reclamation purposes, you may be exempt from certain hazardous waste management requirements. Use the following table to determine which requirements apply to you. Alternatively, you may choose to manage your spent lead-acid batteries under the "Universal Waste" rule in 40 CFR part 273.

If your batteries . . .	And if you. . .	Then you. . .	And you. . .
(1) Will be reclaimed through regeneration (such as by electrolyte replacement).		are exempt from 40 CFR parts 262 (except for §262.11), 263, 264, 265, 266, 268, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA.	are subject to 40 CFR parts 261 and §262.11 of this chapter.
(2) Will be reclaimed other than through regeneration.	generate, collect, and/or transport these batteries.	are exempt from 40 CFR parts 262 (except for §262.11), 263, 264, 265, 266, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA.	are subject to 40 CFR parts 261 and §262.11, and applicable provisions under part 268.
(3) Will be reclaimed other than through regeneration.	store these batteries but you aren't the reclaimer.	are exempt from 40 CFR parts 262 (except for §262.11), 263, 264, 265, 266, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA.	are subject to 40 CFR parts 261, §262.11, and applicable provisions under part 268.
(4) Will be reclaimed other than through regeneration.	store these batteries before you reclaim them.	must comply with 40 CFR 266.80(b) and as appropriate other regulatory provisions described in 266.80(b).	are subject to 40 CFR parts 261, §262.11, and applicable provisions under part 268.
(5) Will be reclaimed other than through regeneration.	don't store these batteries before you reclaim them.	are exempt from 40 CFR parts 262 (except for §262.11), 263, 264, 265, 266, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA.	are subject to 40 CFR parts 261, §262.11, and applicable provisions under part 268.
(6) Will be reclaimed regeneration or by any other means.	export these batteries for reclamation in a foreign country.	are exempt from 40 CFR parts 263, 264, 265, 266, 268, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA. You are also exempt from part 262, except for 262.11, and except for the applicable requirements in either: (1) 40 CFR part 262 subpart H; or (2) 262.53 "Notification of intent to Export," 262.56(a)(1) through (4)(6) and (b) "Annual Reports," and 262.57 "Recordkeeping".	are subject to 40 CFR part 261 and §262.11, and either must comply with 40 CFR part 262, subpart H (if shipping to one of the OECD countries specified in 40 CFR 262.58(a)(1)), or must: (a) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a), (1) through (4), (6), and (b) and

If your batteries . . .	And if you. . .	Then you. . .	And you. . .
			262.57; and (b) Export these batteries only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of part 262 of this chapter; and (c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.
(7) Will be reclaimed through regeneration or any other means.	Transport these batteries in the U.S. to export them for reclamation in a foreign country.	are exempt from 40 CFR parts 263, 264, 265, 266, 268, 270, 124 of this chapter, and the notification requirements at section 3010 of RCRA	must comply with applicable requirements in 40 CFR part 262, subpart H (if shipping to one of the OECD countries specified in 40 CFR 262.58(a)(1)), or must comply with the following: (a) you may not accept a shipment if you know the shipment does not conform to the EPA Acknowledgement of Consent; (b) you must ensure that a copy of the EPA Acknowledgement of Consent accompanies the shipment; and (c) you must ensure that the shipment is delivered to the facility designated by the person initiating the shipment.

(b) If I store spent lead-acid batteries before I reclaim them but not through regeneration, which requirements apply? The requirements of paragraph (b) of this section apply to you if you store spent lead-acid batteries before you

reclaim them, but you don't reclaim them through regeneration. The requirements are slightly different depending on your RCRA permit status.

(1) For Interim Status Facilities, you must comply with:
   - (i) Notification requirements under section 3010 of RCRA.
   - (ii) All applicable provisions in subpart A of part 265 of this chapter.
   - (iii) All applicable provisions in subpart B of part 265 of this chapter except §265.13 (waste analysis).
   - (iv) All applicable provisions in subparts C and D of part 265 of this chapter.
   - (v) All applicable provisions in subpart E of part 265 of this chapter except §§265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies).
   - (vi) All applicable provisions in subparts F through L of part 265 of this chapter.
   - (vii) All applicable provisions in parts 270 and 124 of this chapter.
   - (viii) All applicable provisions in part 267 of this chapter.

(2) For Permitted Facilities.
   - (i) Notification requirements under section 3010 of RCRA.
   - (ii) All applicable provisions in subpart A of part 264 of this chapter.
   - (iii) All applicable provisions in subpart B of part 264 of this chapter (but not §264.13 (waste analysis).
   - (iv) All applicable provisions in subparts C and D of part 264 of this chapter.
   - (v) All applicable provisions in subpart E of part 264 of this chapter (but not §264.71 or §264.72 (dealing with the use of the manifest and manifest discrepancies).
   - (vi) All applicable provisions in subparts F through L of Part 264 of this chapter.
   - (vii) All applicable provisions in parts 270 and 124 of this chapter.
   - (viii) All applicable provisions in part 267 of this chapter.

(d) 40 CFR 266.100 through 266.112 (Subpart H), "Hazardous Waste Burned in Boilers and Industrial Furnaces", are incorporated by reference including subsequent amendments and editions.

SUBPART H -- HAZARDOUS WASTE BURNED IN BOILERS AND INDUSTRIAL FURNACES

266.100 Applicability.

(a) The regulations of this subpart apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in §260.10 of this chapter) irrespective of the purpose of burning or processing, except as provided by paragraphs (b), (c), (d), (g), and (h) of this section. In this subpart, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of §§266.104, 266.105, 266.106, and 266.107 apply to facilities operating under interim status or under a RCRA operating permit as specified in §§266.102 and 266.103.

(b) *Integration of the MACT standards.*

(1) Except as provided by paragraph (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 part 63, subpart EEE, of this chapter. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of this part will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The following standards continue to apply:

(i) If you elect to comply with §270.235(a)(1)(i) of this chapter to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, §266.102(e)(1) requiring operations in accordance with the operating requirements specified in the permit at all times that hazardous waste is in the unit, and §266.102(e)(2)(iii) requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events;

(ii) The closure requirements of §§266.102(e)(11) and 266.103(1);

(iii) The standards for direct transfer of §266.111;

(iv) The standards for regulation of residues of §266.112; and

(v) The applicable requirements of subparts A through H, BB and CC of parts 264 and 265 of this chapter.

(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:

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

(ii) Section 266.106—Standards to control metals emissions, except for mercury; and

(iii) 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.

(c) The following hazardous wastes and facilities are not subject to regulation under this subpart:

(1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter. Such used oil is subject to regulation under part 279 of this chapter;

(2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;

(3) Hazardous wastes that are exempt from regulation under §§261.4 and 261.6(a)(3)(iii) and (iv) of this chapter, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under §261.5 of this chapter; and

(4) Coke ovens, if the only hazardous waste burned is EPA Hazardous Waste No. K087, decanter tank tar sludge from coking operations.

(d) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this subpart, except for §§266.101 and 266.112.

(1) To be exempt from §§266.102 through 266.111, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of paragraph (d)(3) of this section, and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting NESHAP must comply with the requirements of paragraph (h) of this section.

(i) Provide a one-time written notice to the Director indicating the following:

(A) The owner or operator claims exemption under this paragraph:

(B) The hazardous waste is burned solely for metal recovery consistent with the provisions of paragraph (d)(2) of this section;

(C) The hazardous waste contains recoverable levels of metals; and

(D) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this paragraph;

(ii) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this paragraph by using appropriate methods; and

(iii) Maintain at the facility for at least three years records to document compliance with the provisions of this paragraph including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

(2) A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:

(i) The hazardous waste has a total concentration of organic compounds listed in part 261, Appendix VIII, of this chapter exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the 500 ppm limit by *bona fide* treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph (d)(1)(iii) of this section; or

(ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by *bona fide* treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph (d)(1)(iii) of this section.

(3) To be exempt from §§266.102 through 266.111, an owner or operator of a lead or nickel-chromium or mercury recovery furnace, (except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting NESHAP) or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must provide a one-time written notice to the Director identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this paragraph or paragraph (d)(1) of this section. The owners or operator must comply with the requirements of paragraph (d)(1) of this section for those wastes claimed to be exempt under that paragraph and must comply with the requirements below for those wastes claimed to be exempt under this paragraph (d)(3).

(i) The hazardous wastes listed in appendices XI and XII, and XIII, part 266, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of paragraph (d)(1) of this section, provided that:

(A) A waste listed in appendix XI of this part must contain recoverable levels of lead, a waste listed in appendix XII of this part must contain recoverable levels of nickel or chromium, a waste listed in appendix XIII of this part must contain recoverable levels of mercury and contain less than 500 ppm of 40 CFR part 261, appendix VIII organic constituents, and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal; and

(B) The waste does not exhibit the Toxicity Characteristic of §261.24 of this chapter for an organic constituent; and

(C) The waste is not a hazardous waste listed in subpart D of part 261 of this chapter because it is listed for an organic constituent as identified in appendix VII of part 261 of this chapter; and

(D) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of paragraph (d)(3) of this section and that sampling and analysis will be

conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to paragraph (d)(1)(ii) of this section and records to document compliance with paragraph (d)(3) of this section shall be kept for at least three years.

(ii) The Director may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix XI, XII, or XIII of this part that contains a total concentration of more than 500 ppm toxic organic compounds listed in appendix VIII, part 261 of this chapter, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of this subpart. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of this subpart when burning that material. In making the hazard determination, the Director will consider the following factors:

(A) The concentration and toxicity of organic constituents in the material; and

(B) The level of destruction of toxic organic constituents provided by the furnace; and

(C) Whether the acceptable ambient levels established in appendices IV or V of this part may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

(e) The standards for direct transfer operations under §266.111 apply only to facilities subject to the permit standards of Section 266.102 or the interim status standards of Section 266.103.

(f) The management standards for residues under §266.112 apply to any boiler or industrial furnace burning hazardous waste.

(g) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under this subpart, except for §266.112. To be exempt from §§266.101 through 266.111, an owner or operator must:

(1) Provide a one time written notice to the Director indicating the following:

(i) The owner or operator claims exemption under this paragraph;

(ii) The hazardous waste is burned for legitimate recovery of precious metal; and

(iii) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this paragraph; and

(2) Sample and analyze the hazardous waste as necessary to document that the waste contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metal; and

(3) Maintain at the facility for at least three years records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.

(h) Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting NESHAP, are conditionally exempt from regulation under this subpart, except for §266.101. To be exempt, an owner or operator must provide a one-time notice to the Director identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this paragraph. The notice also must state that the waste burned has a total concentration of non-metal compounds listed in part 261, appendix VIII, of this chapter of less than 500 ppm by weight, as fired and as provided in paragraph (d)(2)(i) of this section, or is listed in appendix XI to this part 266.

266.101 Management prior to burning.

(a) *Generators*. Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to part 262 of this chapter.

(b) *Transporters*. Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to part 263 of this chapter.

(c) *Storage and treatment facilities*.

(1) Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of parts 264, 265, 267 and 270 of this chapter, except as provided by paragraph (c)(2) of this section. These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

(2) Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of §266.108, hazardous waste that they generate are exempt from the regulations of parts 264, 265, 267 and 270 of this chapter applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks

that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in paragraph (c)(1) of this section.

266.102 Permit standards for burners.

(a) *Applicability*

(1) *General*. Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status must comply with the requirements of this section and §§270.22 and 270.66 of this chapter, unless exempt under the small quantity burner exemption of §266.108.

(2) *Applicability of part 264 standards*. Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of part 264 of this chapter, except as provided otherwise by this subpart:

(i) In subpart A (General), 264.4;

(ii) In subpart B (General facility standards), §§264.11-264.18;

(iii) In subpart C (Preparedness and prevention), §§264.31-264.37;

(iv) In subpart D (Contingency plan and emergency procedures), §§264.51-264.56;

(v) In subpart E (Manifest system, recordkeeping, and reporting), the applicable provisions of §§264.71-264.77;

(vi) In subpart F (Releases from Solid Waste Management Units), §§264.90 and 264.101;

(vii) In subpart G (Closure and post-closure), §§264.111-264.115;

(viii) In subpart H (Financial requirements), §§264.141, 264.142, 264.143, and 264.147-264.151, except that States and the Federal government are exempt from the requirements of subpart H; and

(ix) Subpart BB (Air emission standards for equipment leaks), except §264.1050(a).

(b) *Hazardous waste analysis.*

(1) The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in appendix VIII of part 261 of this chapter that may reasonably be expected to be in the waste. Such constituents must be identified and quantified if present, at levels detectable by using appropriate analytical procedures. The appendix VIII, part 261 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by this subpart and §§270.22 and 270.66 of this chapter and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis must be included as a portion of the part B permit application, or, for facilities operating under the interim status standards of this subpart, as a portion of the trial burn plan that may be submitted before the part B application under provisions of §270.66(g) of this chapter as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards must provide the information required by §§270.22 or 270.66(c) of this chapter in the part B application to the greatest extent possible.

(2) Throughout normal operation, the owner or operator must conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

(c) *Emissions standards*. Owners and operators must comply with emissions standards provided by §§266.104 through 266.107.

(d) *Permits.*

(1) The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under paragraph (e) of this section, except in approved trial burns under the conditions specified in §270.66 of this chapter.

(2) Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under §270.22 of this chapter.

(3) Boilers and industrial furnaces operating under the interim status standards of §266.103 are permitted under procedures provided by §270.66(g) of this chapter.

(4) A permit for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim status standards) must establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of paragraph (e) of this section, in order to comply with the following standards:

(i) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of 720 hours operating time when burning

hazardous waste, the operating requirements must be those most likely to ensure compliance with the emission standards of §§266.104 through 266.107, based on the Director's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of §266.104, §266.105, §266.106, or §266.107. The Director may extend the duration of this period for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

(ii) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emissions standards of §§266.104 through 266.107 and must be in accordance with the approved trial burn plan;

(iii) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the Director to reflect the trial burn results, the operating requirements must be those most likely to ensure compliance with the emission standards §§266.104 through 266.107 based on the Director's engineering judgment.

(iv) For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in §270.22 of this chapter, as sufficient to ensure compliance with the emissions standards of §§266.104 through 266.107.

(e) *Operating requirements.*

(1) *General*. A boiler or industrial furnace burning hazardous waste must be operated in accordance with the operating requirements specified in the permit at all times when there is hazardous waste in the unit.

(2) *Requirements to ensure compliance with the organic emissions standards.*

(i) *DRE standard*. Operating conditions will be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated (in a trial burn or by alternative data as specified in §270.22) to be sufficient to comply with the destruction and removal efficiency (DRE) performance standard of §266.104(a) or as those special operating requirements provided by §266.104(a)(4) for the waiver of the DRE trial burn. When the DRE trial burn is not waived under §266.104(a)(4), each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

(A) Feed rate of hazardous waste and other fuels measured and specified as prescribed in paragraph (e)(6) of this section;

(B) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (e)(6) of this section;

(C) Appropriate controls of the hazardous waste firing system;

(D) Allowable variation in boiler and industrial furnace system design or operating procedures;

(E) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in paragraph (e)(6) of this section;

(F) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in paragraph (e)(6) of this section, unless documentation is provided under §270.66 of this chapter demonstrating adequate combustion gas residence time; and

(G) Such other operating requirements as are necessary to ensure that the DRE performance standard of §266.104(a) is met.

(ii) *Carbon monoxide and hydrocarbon standards*. The permit must incorporate a carbon monoxide (CO) limit and, as appropriate, a hydrocarbon (HC) limit as provided by paragraphs (b), (c), (d), (e) and (f) of §266.104. The permit limits will be specified as follows:

(A) When complying with the CO standard of §266.104(b)(1), the permit limit is 100 ppmv;

(B) When complying with the alternative CO standard under §266.104(c), the permit limit for CO is based on the trial burn and is established as the average over all valid runs of the highest hourly rolling average CO level of each run, and the permit limit for HC is 20 ppmv (as defined in §266.104(c)(1)), except as provided in §266.104(f).

(C) When complying with the alternative HC limit for industrial furnaces under §266.104(f), the permit limit for HC and CO is the baseline level when hazardous waste is not burned as specified by that paragraph.

(iii) *Start-up and shut-down*. During start-up and shut-down of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the

trial burn requirements under §§266.104(a)(5), 266.105, 266.106, and 266.107) must not be fed into the device unless the device is operating within the conditions of operation specified in the permit.

(3) *Requirements to ensure conformance with the particulate standard.*

(i) Except as provided in paragraphs (e)(3)(ii) and (iii) of this section, the permit shall specify the following operating requirements to ensure conformance with the particulate standard specified in §266.105:

(A) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in paragraph (e)(6) of this section;

(B) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in paragraph (e)(6) of this section;

(C) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(D) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(E) Such other operating requirements as are necessary to ensure that the particulate standard in §266.105(a) is met.

(ii) Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities exempt from the particulate matter standard under §266.105(b);

(iii) For cement kilns and light-weight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.

(4) *Requirements to ensure conformance with the metals emissions standard.*

(i) For conformance with the Tier I (or adjusted Tier I) metals feed rate screening limits of paragraphs (b) or (e) of §266.106, the permit shall specify the following operating requirements:

(A) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of paragraph (e)(6) of this section;

(B) Total feed rate of hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;

(C) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II metals emission rate screening limits under §266.106(c) and the Tier III metals controls under §266.106(d), the permit shall specify the following operating requirements;

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (e)(6)(i) of this section;

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraphs (e)(6) of this section:

(1) Total feedstreams;

(2) Total hazardous waste feed; and

(3) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in paragraph (e)(6) of this section;

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (e)(6) of this section;

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (e)(6) of this section;

(G) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in paragraph (e)(6) of this section;

(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(J) Such other operating requirements as are necessary to ensure that the metals standards under §§266.106(c) or 266.106(d) are met.

(iii) For conformance with an alternative implementation approach approved by the Director under Section 266.106(f), the permit will specify the following operating requirements:

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (e)(6)(i) of this section;

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraph (e)(6) of this section:

(1) Total hazardous waste feed; and

(2) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feedstreams measured and specified prescribed in paragraph (e)(6) of this section;

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (e)(6) of this section;

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (e)(6) of this section;

(G) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in paragraph (e)(6) of this section;

(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(J) Such other operating requirements as are necessary to ensure that the metals standards under §§266.106(c) or 266.106(d) are met.

(5) Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.

(i) For conformance with the Tier I total chloride and chlorine feed rate screening limits of §266.107(b)(1), the permit will specify the following operating requirements:

(A) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in paragraph (e)(6) of this section;

(B) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;

(C) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II HCl and Cl_2 emission rate screening limits under §266.107(b)(2) and the Tier III HCl and Cl_2 controls under §266.107(c), the permit will specify the following operating requirements:

(A) Maximum emission rate for HCl and for Cl_2 specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;

(C) Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in paragraph (e)(6) of this section;

(D) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (e)(6) of this section;

(E) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(F) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(G) Such other operating requirements as are necessary to ensure that the HCl and Cl_2 standards under §266.107 (b)(2) or (c) are met.

(6) *Measuring parameters and establishing limits based on trial burn data*.

(i) *General requirements*. As specified in paragraphs (e)(2) through (e)(5) of this section, each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures:

(A) *Instantaneous limits*. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or

(B) *Hourly rolling average*.

(1) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least

once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(2) The permit limit for the parameter shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.

(ii) *Rolling average limits for carcinogenic metals and lead*. Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (e)(6)(i) of this section or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an average period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of the preceding clock hour; and

(C) The permit limit for the feed rate of each metal shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.

(iii) *Feed rate limits for metals, total chloride and chlorine, and ash*. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (e)(6)(i) and (ii) of this section.

(iv) *Conduct of trial burn testing*.

(A) If compliance with all applicable emissions standards of §§266.104 through 266.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of §§266.104 through 266.107 or establishing limits on operating parameters under this section, the facility must operate under trial burn conditions for a sufficient period to reach steady-state operations. The Director may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under §266.106(f), need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

(C) Trial burn data on the level of an operating parameter for which a limit must be established in the permit must be obtained during emissions sampling for the pollutant(s) (i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter must be established as specified by paragraph (e) of this section.

(7) *General requirements*.

(i) *Fugitive emissions*. Fugitive emissions must be controlled by:

(A) Keeping the combustion zone totally sealed against fugitive emissions; or

(B) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(C) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(ii) *Automatic waste feed cut off*. A boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this section. The Director may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

(A) The permit limit for (the indicator of) minimum combustion chamber temperature must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;

(B) Exhaust gases must be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and

(C) Operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the Director will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.

(iii) *Changes*. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.

(8) *Monitoring and Inspections*.

(i) The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:

(A) If specified by the permit, feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine;

(B) If specified by the permit, carbon monoxide (CO), hydrocarbons (HC), and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in paragraph (e)(2)(ii) of this section. CO, HC, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in Appendix IX of this part.

(C) Upon the request of the Director, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues, and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the applicable standards of Sections 266.104, 266.105, 266.106, and 266.107.

(ii) All monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit.

(iii) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, etc.) must be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(iv) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Director that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing must be conducted at least once every 30 days.

(v) These monitoring and inspection data must be recorded and the records must be placed in the operating record required by §264.73 of this chapter.

(9) *Direct transfer to the burner*. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with Section 266.111.

(10) *Recordkeeping*. The owner or operator must maintain in the operating record of the facility all information and data required by this section for five years.

(11) *Closure*. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace.

266.103 Interim Status Standards for Burners.

(a) *Purpose, scope, applicability*.

(1) *General*.

(i) The purpose of this section is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim status. The standards of

this section apply to owners and operators of existing facilities until either a permit is issued under §266.102(d) or until closure responsibilities identified in this section are fulfilled.

(ii) *Existing or in existence* means a boiler or industrial furnace that on or before August 21, 1991 is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn or to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the Federal, State, and local approvals or permits necessary to begin physical construction; and either:

(A) A continuous on-site, physical construction program has begun; or

(B) The owner or operator has entered into contractual obligations--which cannot be canceled or modified without substantial loss--for physical construction of the facility to be completed within a reasonable time.

(iii) If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility must comply with the applicable regulations dealing with permit modifications in §270.42 or changes in interim status in §270.72 of this chapter.

(2) *Exemptions*. The requirements of this section do not apply to hazardous waste and facilities exempt under §§266.100(b), or 266.108.

(3) *Prohibition on burning dioxin-listed wastes*. The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under interim status: F020, F021, F022, F023, F026, or F027.

(4) *Applicability of part 265 standards*. Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions of part 265 of this chapter, except as provided otherwise by this section:

(i) In subpart A (General), Section 265.4;

(ii) In subpart B (General facility standards), §§265.11-265.17;

(iii) In subpart C (Preparedness and prevention), §§265.31-265.37;

(iv) In subpart D (Contingency plan and emergency procedures), §§265.51-265.56;

(v) In subpart E (Manifest system, recordkeeping, and reporting), §§265.71-265.77, except that §§265.71, 265.72, and 265.76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources;

(vi) In subpart G (Closure and post-closure), §265.111-265.115;

(vii) In subpart H (Financial requirements), §265.141, 265.142, 265.143, and 265.147-265.150, except that States and the Federal government are exempt from the requirements of subpart H; and

(viii) Subpart BB (Air emission standards for equipment leaks), except §265.1050(a).

(5) *Special requirements for furnaces*. The following controls apply during interim status to industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see paragraph (a)(5)(ii) of this section) at any location other than the hot end where products are normally discharged or where fuels are normally fired:

(i) *Controls*.

(A) The hazardous waste shall be fed at a location where combustion gas temperatures are at least 1800 degrees F;

(B) The owner or operator must determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;

(C) For cement kiln systems, the hazardous waste shall be fed into the kiln; and

(D) The hydrocarbon controls of §266.104(c) or paragraph (c)(5) of this section apply upon certification of compliance under paragraph (c) of this section irrespective of the CO level achieved during the compliance test.

(ii) *Burning hazardous waste solely as an ingredient*. A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

(A) The hazardous waste has a total concentration of nonmetal compounds listed in part 261, Appendix VIII, of this chapter exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the facility record; or

(B) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by *bona fide* treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the 5,000 Btu/lb limit is

prohibited and documentation that the waste has not been impermissibly blended must be retained in the facility record.

(6) *Restrictions on burning hazardous waste that is not a fuel*. Prior to certification of compliance under paragraph (c) of this section, owners and operators shall not feed hazardous waste that has a heating value less than 5,000 Btu/lb, as-generated, except that the heating value of a waste as generated may be increased to above the 5,000 Btu/lb limit by bona fide treatment; however, blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and records must be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:

(i) Hazardous waste may be burned solely as an ingredient; or

(ii) Hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed 720 hours; or

(iii) Such waste may be burned if the Director has documentation to show that, prior to August 21, 1991:

(A) The boiler or industrial furnace is operating under the interim status standards for incinerators provided by subpart O of part 265 of this chapter, or the interim status standards for thermal treatment units provided by subpart P of part 265 of this chapter; and

(B) The boiler or industrial furnace met the interim status eligibility requirements under Section 270.70 of this chapter for subpart O or subpart P of part 265 of this chapter; and

(C) Hazardous waste with a heating value less than 5,000 Btu/lb was burned prior to that date; or

(iv) Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under Section 261.2(e) of this chapter prior to February 21, 1991 and documentation is kept on file supporting this claim.

(7) *Direct transfer to the burner*. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with Section 266.111.

(b) *Certification of precompliance.*

(1) *General*. The owner or operator must provide complete and accurate information specified in paragraph (b)(2) of this section to the Director on or before August 21, 1991, and must establish limits for the operating parameters specified in paragraph (b)(3) of this section. Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in paragraph (b)(3) of this section, the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and HCl and Cl_2 are not likely to exceed the limits provided by §§266.105, 266.106, and 266.107. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under paragraph (b)(3) of this section until the owner or operator submits a revised certification of precompliance under paragraph (b)(8) of this section or a certification of compliance under paragraph (c) of this section, or until a permit is issued.

(2) *Information required*. The following information must be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in paragraph (b)(3) of this section are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, and HCl and Cl_2:

(i) General facility information:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;

(D) A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and

(E) A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.

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

(A) The feed rate (lb/hr) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks);

(B) The estimated partitioning factor to the combustion gas for the materials identified in paragraph (b)(2)(ii)(A) of this section and the basis for the estimate and an estimate of the partitioning to HCl and Cl_2 of total chloride and chlorine in feed materials. To estimate the

partitioning factor, the owner or operator must use either best engineering judgment or the procedures specified in Appendix IX of this part.

(C) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under paragraph (c)(3)(ii)(A), the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator must use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in Appendix IX of this part.

(D) If best engineering judgment is used to estimate partitioning factors or enrichment factors under paragraphs (b)(2)(ii)(B) or (b)(2)(ii)(C) respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under this section, the determinations must be made by a qualified, registered professional engineer and a certification of his/her determinations in accordance with Section 270.11(d) of this chapter must be provided in the certification of precompliance.

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

(iv) For facilities complying with the Tier II or Tier III emission limits for metals or HCl and Cl_2 (under §§266.106 (c) or (d) or 266.107(b)(2) or (c)), the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by §266.106, and HCl and Cl_2, and the following information to support such determinations:

(A) The estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, Cl_2 antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.

(B) To estimate APCS removal efficiency, the owner or operator must use either best engineering judgment or the procedures prescribed in Appendix IX of this part.

(C) If best engineering judgment is used to estimate APCS removal efficiency, the basis for the judgment. Use of best engineering judgment must be in conformance with provisions of paragraph (b) (2)(ii)(D) of this section.

(v) Determination of allowable emissions rates for HCl, Cl_2, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:

(A) For all facilities:

(1) Physical stack height;
(2) Good engineering practice stack height as defined by 40 CFR 51.100(ii);
(3) Maximum flue gas flow rate;
(4) Maximum flue gas temperature;
(5) Attach a US Geological Service topographic map (or equivalent) showing the facility location and surrounding land within 5 km of the facility;
(6) Identify terrain type: complex or noncomplex; and
(7) Identify land use: urban or rural.

(B) For owners and operators using Tier III site specific dispersion modeling to determine allowable levels under §266.106(d) or §266.107(c), or adjusted Tier I feed rate screening limits under §§266.106(e) or 266.107(e):

(1) Dispersion model and version used;
(2) Source of meteorological data;
(3) The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average off-site (unless on-site is required) ground level concentration (MEI location); and
(4) Indicate the MEI location on the map required under paragraph (b)(2)(v)(A)(5);

(vi) For facilities complying with the Tier II or III emissions rate controls for metals or HCl and Cl2, a comparison of the estimated controlled emissions rates determined under paragraph (b)(2)(iv) with the allowable emission rates determined under paragraph (b)(2)(v);

(vii) For facilities complying with the Tier I (or adjusted Tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under paragraph (b)(2)(iii) of this section to the Tier I allowable feed rates; and

(viii) For industrial furnaces that feed hazardous waste for any purpose other than solely as

an ingredient (as defined by paragraph (a)(5)(ii) of this section) at any location other than the product discharge end of the device, documentation of compliance with the requirements of paragraphs (a)(5)(i)(A), (B), and (C) of this section.

(ix) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under paragraph (c)(3)(ii) (A) of this section:

(A) The applicable particulate matter standard in lb/hr; and

(B) The precompliance limit on the concentration of each metal in collected PM.

(3) *Limits on operating conditions.*

The owner and operator shall establish limits on the following parameters consistent with the determinations made under paragraph (b)(2) of this section and certify (under provisions of paragraph (b)(9) of this section) to the Director that the facility will operate within the limits during interim status when there is a hazardous waste in the unit until revised certification of precompliance under paragraph (b)(8) of this section or certification of compliance under paragraph (c) of this section:

(i) Feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under §266.106(b) or (e)) pumpable hazardous waste;

(ii) Feed rate of each metal in the following feed streams:

(A) Total feed streams, except that industrial furnaces that comply with the alternative metals implementation approach under paragraph (b)(4) of this section must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

(B) Total hazardous waste feed, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under §266.100(b) of (e); and

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

(iii) Total feed rate of chlorine and chloride in total feed streams;

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited; and

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

(4) *Operating requirements for furnaces that recycle PM.* Owners and operators of furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions controls under paragraph (c)(3)(ii)(A) of this section must comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in Appendix IX of this part.

(5) *Measurement of feed rates and production rate*.

(i) *General requirements*.

Limits on each of the parameters specified in paragraph (b)(3) of this section (except for limits on metals concentrations in collected particulate matter (PM) for industrial furnaces that recycle collected PM) shall be established and continuously monitored under either of the following methods:

(A) *Instantaneous limits*. A limit for a parameter may be established and continuously monitored on an instantaneous basis (i.e., the value that occurs at any time) not to be exceeded at any time; or

(B) *Hourly rolling average limits*. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(ii) *Rolling average limits for carcinogenic metals and lead*. Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (b)(5)(i)(B) or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour.

(iii) *Feed rate limits for metals, total chloride and chlorine, and ash*. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (b)(5)(i) and (ii) of this section.

(6) *Public notice requirements at precompliance*. On or before August 21, 1991, (the effective date of this rule), the owner or operator must submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of State and local government. The owner and operator must provide to the Director with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of 40 CFR 266.103(b)", must include:

(i) Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste;

(ii) Date that the certification of precompliance is submitted to the Director;

(iii) Brief description of the regulatory process required to comply with the interim status requirements of this section including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and HCl and Cl_2;

(iv) Types and quantities of hazardous waste burned including, but not limited to, source, whether solids or liquids, as well as an appropriate description of the waste;

(v) Type of device(s) in which the hazardous waste is burned including a physical description and maximum production rate of each device;

(vi) Types and quantities of other fuels and industrial furnace feedstocks fed to each unit;

(vii) Brief description of the basis for this certification of precompliance as specified in paragraph (b)(2) of this section;

(viii) Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include:

(A) The administrative record kept by the Agency office where the supporting documentation was submitted or another location designated by the Director; and

(B) The BIF correspondence file kept at the facility site where the device is located;
The correspondence file must include all correspondence between the facility and the Director, state and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of EPA and State site visit reports submitted to the owner or operator.

(ix) Notification of the establishment of a facility mailing list whereby interested parties shall notify the Agency that they wish to be placed on the mailing list to receive future information and notices about this facility; and

(x) Location (mailing address) of the applicable EPA Regional Office, Hazardous Waste Division, where further information can be obtained on EPA regulation of hazardous waste burning.

(7) *Monitoring other operating parameters*. When the monitoring systems for the operating parameters listed in paragraphs (c)(1)(v through xiii) of this section are installed and operating in conformance with vendor specifications or (for CO, HC, and oxygen) specifications provided by Appendix IX of this part, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

(8) *Revised certification of precompliance*. The owner or operator may revise at any time the information and operating conditions documented under paragraphs (b)(2) and (b)(3) of this section in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by those paragraphs.

(i) The public notice requirements of paragraph (b)(6) of this section do not apply to recertifications.

(ii) The owner and operator must operate the facility within the limits established for the operating parameters under paragraph (b)(3) of this section until a revised certification is submitted under this paragraph or a certification of compliance is submitted under paragraph (c) of this section.

(9) *Certification of precompliance statement*. The owner or operator must include the following signed statement with the certification of precompliance submitted to the Director:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Section 266.103(b) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to Section 266.103(b)(3) and (4) are enforceable limits at which the facility can legally operate during interim status until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating permit is issued."

(c) *Certification of compliance*. The owner or operator shall conduct emissions testing to document compliance with the emission standards of Sections 266.104(b) through (e), 266.105, 266.106, 266.107, and paragraph (a)(5)(i)(D) of this section, under the procedures prescribed by this paragraph, except under extensions of time provided by paragraph (c)(7). Based on the compliance test, the owner or operator shall submit to the Director, on or before August 21, 1992, a complete and accurate "certification of compliance" (under paragraph (c)(4) of this section) with those emission standards establishing limits on the operating parameters specified in paragraph (c)(1).

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

(i) Feed rate of total hazardous waste and (unless complying the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e)), pumpable hazardous waste;

(ii) Feed rate of each metal in the following feedstreams:

(A) Total feedstreams, except that:

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

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

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

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

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

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(v) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the CO controls of Section 266.104(b), the CO limit is 100 ppmv, and when complying with the HC controls of Section 266.104(c), the HC limit is 20 ppmv. When complying with the CO controls of Section 266.104(c), the CO limit is established based on the compliance test;

(vi) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under Section

266.107(b)(1) or (e) and for all metals under Section 266.106(b) or (e), and the uncontrolled particulate emissions do not exceed the standard under Section 266.105.

(vii) Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection, (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e));

(viii) Maximum flue gas temperature entering a particulate matter control device (unless complying with Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b) or (e));

(ix) For systems using wet scrubbers, including wet ionizing scrubbers (unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Section 266.106 (b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(A) Minimum liquid to flue gas ratio;

(B) Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and

(C) Minimum pH level of the scrubber water;

(x) For systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(xi) For systems using dry scrubbers (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(A) Minimum caustic feed rate; and

(B) Maximum flue gas flow rate:

(xii) For systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e)):

(A) Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and

(B) Maximum flue gas flow rate;

(xiii) For systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e)).

(2) *Prior notice of compliance testing*.

At least 30 days prior to the compliance testing required by paragraph (c)(3) of this section, the owner or operator shall notify the Director and submit the following information:

(i) General facility information including:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Person responsible for conducting compliance test, including company name, address, and telephone number, and a statement of qualifications;

(D) Planned date of the compliance test;

(ii) Specific information on each device to be tested including:

(A) Description of boiler or industrial furnace;

(B) A scaled plot plan showing the entire facility and location of the boiler or industrial furnace;

(C) A description of the air pollution control system;

(D) Identification of the continuous emission monitors that are installed, including:

(1) Carbon monoxide monitor;

(2) Oxygen monitor;

(3) Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than 150 degrees C., an explanation of why a heated system is not used (see paragraph (c) (5) of this section) and a brief description of the sample gas conditioning system;

(E) Indication of whether the stack is shared with another device that will be in operation during the compliance test;

(F) Other information useful to an understanding of the system design or operation.

(iii) Information on the testing planned, including a complete copy of the test protocol and Quality Assurance/Quality Control (QA/QC) plan, and a summary description for each test providing the following information at a minimum:

(A) Purpose of the test (e.g., demonstrate compliance with emissions of particulate matter); and

(B) Planned operating conditions, including levels for each pertinent parameter specified in paragraph (c)(1) of this section.

(3) *Compliance testing*.

(i) *General*. Compliance testing must be conducted under conditions for which the owner or operator has submitted a certification of precompliance under paragraph (b) of this section and under conditions established in the notification of compliance testing required by paragraph (c)(2) of this section. The owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar on-site unit. To support the request, the owner or operator must provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation, and maintenance of both the tested unit and the similar unit. The Director shall provide a written approval to use compliance test data in lieu of testing a similar unit if he finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of Section 266.103(c).

(ii) *Special requirements for industrial furnaces that recycle collected PM*. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must comply with one of the following procedures for testing to determine compliance with the metals standards of 266.106(c) or (d):

(A) The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in Appendix IX of this part; or

(B) Stack emissions testing for a minimum of 6 hours each day while hazardous waste is burned during interim status. The testing must be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content must be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under Section 266.106(c) or (d). Under this option, operating limits (under paragraph (c)(1) of this section) must be established during compliance testing under paragraph (c)(3) of this section only on the following parameters:

(1) Feed rate of total hazardous waste;

(2) Total feed rate of chlorine and chloride in total feed streams;

(3) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(4) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas;

(5) Maximum production rate of the device in appropriate units when producing normal product; or

(C) Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of paragraph (c)(1) of this section only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test must be fed at the feed rates that will be fed during the compliance test.

(iii) *Conduct of compliance testing*.

(A) If compliance with all applicable emissions standards of Sections 266.104 through 266.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of Sections 266.104 through 266.107 or establishing limits on operating parameters under this section, the facility must operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with paragraphs (c)(3)(ii)(A) or (B) of this section, however, need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

(C) Compliance test data on the level of an operating parameter for which a limit must be established in the certification of compliance must be obtained during emissions sampling for the pollutant(s)(i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter must be established as specified by paragraph (c)(1) of this section.

(4) *Certification of compliance*.

Within 90 days of completing compliance testing, the owner or operator must certify to the Director compliance with the emissions standards of Sections 266.104(b),(c), and (e), 266.105, 266.106, 266.107, and paragraph (a)(5)(i)(D) of this section. The certification of compliance must include the following information:

(i) General facility and testing information including:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;

(D) Date(s) of each compliance test;

(E) Description of boiler or industrial furnace tested;

(F) Person responsible for quality assurance/quality control (QA/QC), title, and telephone number, and statement that procedures prescribed in the QA/QC plan submitted under §266.103(c)(2)(iii) have been followed, or a description of any changes and an explanation of why changes were necessary;

(G) Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under paragraph (c)(2) of this section, and an explanation of why the changes were necessary;

(H) Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under paragraph (c)(2) of this section, and an explanation of why the changes were necessary; and

(I) The complete report on results of emissions testing.

(ii) Specific information on each test including:

(A) Purpose(s) of test (e.g., demonstrate conformance with the emissions limits for particulate matter, metals, HCl, Cl_2, and CO)

(B) Summary of test results for each run and for each test including the following information:

(1) Date of run;

(2) Duration of run;

(3) Time-weighted average and highest hourly rolling average CO level for each run and for the test;

(4) Highest hourly rolling average HC level, if HC monitoring is required for each run and for the test;

(5) If dioxin and furan testing is required under §266.104(e), time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;

(6) Time-weighted average particulate matter emissions for each run and for the test;

(7) Time-weighted average HCl and Cl_2 emissions for each run and for the test;

(8) Time-weighted average emissions for the metals subject to regulation under Section 266.106 for each run and for the test; and

(9) QA/QC results.

(iii) Comparison of the actual emissions during each test with the emissions limits prescribed by §266.104(b), (c), and (e), 266.105, 266.106, and 266.107 and established for the facility in the certification of precompliance under paragraph (b) of this section.

(iv) Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in paragraph (c)(1) of this section using either of the following procedures:

(A) *Instantaneous limits.* A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the operating limit specified as the time-weighted average during all runs of the compliance test; or

(B) *Hourly rolling average basis.*

(1) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(2) The operating limit for the parameter shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average value for each run.

(C) *Rolling average limits for carcinogenic metals and lead.* Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (c)(4)(iv)(B)

of this section or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(1) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(2) The continuous monitor shall meet the following specifications:

(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) The rolling average for the selected averaging period is defined as arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour; and

(3) The operating limit for the feed rate of each metal shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average feed rate for each run.

(D) *Feed rate limits for metals, total chloride and chlorine, and ash*. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (c)(4)(iv) (A) through (C) of this section.

(v) *Certification of compliance statement*. The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Section 266.103(c) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to §266.103(c)(4)(iv) are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted."

(5) *Special requirements for HC monitoring systems*. When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by §266.104(c) or paragraph (a)(5)(i)(D) of this section, a conditioned gas monitoring system may be used in conformance with specifications provided in Appendix IX of this part provided that the owner or operator submits a certification of compliance without using extensions of time provided by paragraph (c)(7) of this section

(6) *Special operating requirements for industrial furnaces that recycle collected PM*. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must:

(i) When complying with the requirements of paragraph (c)(3)(ii)(A) of this section, comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in Appendix IX of this part; and

(ii) When complying with the requirements of paragraph (c)(3)(ii)(B) of this section, comply with the operating requirements prescribed by that paragraph.

(7) *Extensions of time*.

(i) If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of §§266.104, 266.105, 266.106, and 266.107 by August 21, 1992, he/she must either:

(A) Stop burning hazardous waste and begin closure activities under paragraph (1) of this section for the hazardous waste portion of the facility; or

(B) Limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for compliance testing) a total period of 720 hours for the period of time beginning

August 21, 1992, submit a notification to the Director by August 21, 1992 stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

(C) Obtain a case-by-case extension of time under paragraph (c)(7)(ii) of this section.

(ii) The owner or operator may request a case-by-case extension of time to extend any time limit provided by paragraph (c) of this section if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

(A) In granting an extension, the Director may apply conditions as the facts warrant to ensure timely compliance with the requirements of this section and that the facility operates in a manner that does not pose a hazard to human health and the environment;

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

(1) The Director shall, in considering whether to grant the extension:

(i) Determine whether the owner and operator have submitted in a timely manner a complete Part B permit application that includes information required under §270.22(b) of this chapter; and

(ii) Consider whether the owner and operator have made a good faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of §266.104(e) and the controls on PM, metals, and HCl/Cl_2.

(2) If an extension is granted, the Director shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on CO and HC that, based on available information, including information in the part B permit application, are baseline CO and HC levels as defined by §266.104(f)(1).

(8) *Revised certification of compliance*. The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) under the following procedures:

(i) Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of 720 hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of §§266.104, 266.105, 266.106, and 266.107;

(ii) At least 30 days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the Director and submit the following information:

(A) EPA facility ID number, and facility name, contact person, telephone number, and address;

(B) Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;

(C) A determination that when operating under the revised operating conditions, the applicable emissions standards of §§266.104, 266.105, 266.106, and 266.107 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under paragraph (b)(2) of this section; and

(D) Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of §§266.104, 266.105, 266.106, and 266.107 when operating under revised operating conditions. The protocol shall include a schedule of pre-testing and compliance testing. If the owner and operator revises the scheduled date for the compliance test, he/she shall notify the Director in writing at least 30 days prior to the revised date of the compliance test;

(iii) Conduct a compliance test under the revised operating conditions and the protocol submitted to the Director to determine compliance with the applicable emissions standards of §§266.104, 266.105, 266.106, and 266.107; and

(iv) Submit a revised certification of compliance under paragraph (c)(4) of this section.

(d) *Periodic Recertifications*. The owner or operator must conduct compliance testing and submit to the Director a recertification of compliance under provisions of paragraph (c) of this section within five years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, he/she must comply with the requirements of paragraph (c)(8) of this section.

(e) *Noncompliance with certification schedule*. If the owner or operator does not comply with the interim status compliance schedule provided by paragraphs (b), (c), and (d) of this section, hazardous waste burning must terminate on the date that the deadline is missed, closure activities must begin under paragraph (1) of this section, and hazardous waste burning may not resume except under an operating permit issued under Section 270.66 of this chapter. For purposes of compliance with the closure provisions of paragraph (1) of this section and Sections

265.112(d)(2) and 265.113 of this chapter the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

(f) *Start-up and shut-down*. Hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride/chlorine) must not be fed into the device during start-up and shut-down of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

(g) *Automatic waste feed cutoff*. During the compliance test required by paragraph (c)(3) of this section, and upon certification of compliance under paragraph (c) of this section, a boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in paragraphs (c)(1)(i) and (v through xiii) of this section deviate from those established in the certification of compliance. In addition:

(1) To minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:

(i) If compliance with the combustion chamber temperature limit is based on an hourly rolling average, the minimum temperature during the compliance test is considered to be the average over all runs of the lowest hourly rolling average for each run; or

(ii) If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and

(2) Operating parameters limited by the certification of compliance must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

(h) *Fugitive emissions*. Fugitive emissions must be controlled by:

(1) Keeping the combustion zone totally sealed against fugitive emissions; or

(2) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(3) An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

(i) *Changes*. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

(j) *Monitoring and Inspections*.

(1) The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:

(i) Feed rates and composition of hazardous waste, other fuels, and industrial furnace feed stocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance;

(ii) Carbon monoxide (CO), oxygen, and if applicable, hydrocarbons (HC), on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. CO, HC, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in Appendix IX of this part.

(iii) Upon the request of the Director, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feed stocks as appropriate) and the stack gas emissions must be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of Sections 266.104, 266.105, 266.106, and 266.107.

(2) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, etc.) must be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(3) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least once every 30 days.

(4) These monitoring and inspection data must be recorded and the records must be placed in the operating log.

(k) *Recordkeeping*. The owner or operator must keep in the operating record of the facility all information and data required by this section for five years.

(l) *Closure*. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace and must comply with Sections 265.111-265.115 of this chapter.

266.104 Standards to Control Organic Emissions.

(a) *DRE standard*.

(1) *General*. Except as provided in paragraph (a)(3) of this section, a boiler or industrial furnace burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99% DRE must be demonstrated during a trial burn for each principal organic hazardous constituent (P0HC) designated (under paragraph (a)(2) of this section) in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \left[1 - \frac{W_{out}}{W_{in}}\right] x\,100$$

where:

W_{in} = Mass feed rate of one principal organic hazardous constituent (POHC) in the hazardous waste fired to the boiler or industrial furnace; and

W_{out} = Mass emission rate of the same POHC present in stack gas prior to release to the atmosphere.

(2) Designation of POHCs. Principal organic hazardous constituents (POHCs) are those compounds for which compliance with the DRE requirements of this section shall be demonstrated in a trial burn in conformance with procedures prescribed in Section 270.66 of this chapter. One or more POHCs shall be designated by the Director for each waste feed to be burned. POHCs shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with part B of the permit application. POHCs are most likely to be selected from among those compounds listed in part 261, Appendix VIII of this chapter that are also present in the normal waste feed. However, if the applicant demonstrates to the Regional Administrator's satisfaction that a compound not listed in Appendix VIII or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements of this section, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

(3) *Dioxin-listed waste*. A boiler or industrial furnace burning hazardous waste containing (or derived from) EPA Hazardous Wastes Nos. F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC designated (under paragraph (a)(2) of this section) in its permit. This performance must be demonstrated on POHCs that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-*p*-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in paragraph (a) of this section. In addition, the owner or operator of the boiler or industrial furnace must notify the Director of intent to burn EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(4) *Automatic waiver of DRE trial burn*. Owners and operators of boilers operated under the special operating requirements provided by Section 266.110 are considered to be in compliance with the DRE standard of paragraph (a)(1) of this section and are exempt from the DRE trial burn.

(5) *Low risk waste*. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the requirements of Section 266.109(a) are considered to be in compliance with the DRE standard of paragraph (a)(1) of this section and are exempt from the DRE trial burn.

(b) *Carbon monoxide standard*.

(1) Except as provided in paragraph (c) of this section, the stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste cannot exceed 100 ppmv on an hourly rolling average basis (i.e., over any 60 minute period), continuously corrected to 7 percent oxygen, dry gas basis.

(2) CO and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in Appendix IX of this part.

(3) Compliance with the 100 ppmv CO limit must be demonstrated during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). To demonstrate compliance, the highest hourly rolling average CO level during any valid run of the trial burn or compliance test must not exceed 100 ppmv.

(c) *Alternative carbon monoxide standard.*

(1) The stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste may exceed the 100 ppmv limit provided that stack gas concentrations of hydrocarbons (HC) do not exceed 20 ppmv, except as provided by paragraph (f) of this section for certain industrial furnaces.

(2) HC limits must be established under this section on an hourly rolling average basis (i.e., over any 60 minute period), reported as propane, and continuously corrected to 7 percent oxygen, dry gas basis.

(3) HC shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in Appendix IX of this part. CO and oxygen shall be continuously monitored in conformance with paragraph (b)(2) of this section.

(4) The alternative CO standard is established based on CO data during the trial burn (for a new facility) and the compliance test (for an interim status facility). The alternative CO standard is the average over all valid runs of the highest hourly average CO level for each run. The CO limit is implemented on an hourly rolling average basis, and continuously corrected to 7 percent oxygen, dry gas basis.

(d) *Special requirements for furnaces*.

Owners and operators of industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see Section 266.103(a)(5)(ii)) at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits provided by paragraphs (c) or (f) of this section irrespective of whether stack gas CO concentrations meet the 100 ppmv limit of paragraph (b) of this section.

(e) *Controls for dioxins and furans*. Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of 450-750 Degrees F., and industrial furnaces operating under an alternative hydrocarbon limit

established under paragraph (f) of this section must conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual (MEI) exceeding 1 in 100,000:

(1) During the trial burn (for new facilities or an interim status facility applying for a permit) or compliance test (for interim status facilities), determine emission rates of the tetra-octa congeners of chlorinated Dibenzo-p-Dioxins and dibenzofurans (CDDs/CDFs) using Method 0023A, Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter.

(2) Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra-octa CDDs/CDFs congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in Appendix IX of this part. Multiply the emission rates of CDD/CDF congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;

(3) Conduct dispersion modeling using methods recommended in Guideline on Air Quality Models (Revised) or the "Hazardous Waste Combustion Air Quality Screening Procedure", which are provided in Appendices X and IX, respectively, of this part, or "EPA SCREEN Screening Procedure" as described in Screening Procedures for Estimating Air Quality Impact of Stationary Sources (incorporated by reference in Section 260.11) to predict the maximum annual average off-site ground level concentration of 2,3,7,8-TCDD equivalents determined under paragraph (e)(2) of this section. The maximum annual average on-site concentration must be used when a person resides on-site; and

(4) The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in Appendix V of this part a (2.2×10^{-7}) shall not exceed 1.0.

(f) *Monitoring CO and HC in the bypass duct of a cement kiln*. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by paragraphs (b), (c), and (d) of this section by monitoring in the by-pass duct provided that:

(1) Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and

(2) The by-pass duct diverts a minimum of 10% of kiln off-gas into the duct.

(g) *Use of emissions test data to demonstrate compliance and establish operating limits*. Compliance with the requirements of this section must be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the CO and HC limits of this section or to establish alternative CO or HC limits under this section must be obtained during the time that DRE

testing, and where applicable, CDD/CDF testing under paragraph (e) of this section and comprehensive organic emissions testing under paragraph (f) is conducted.

(h) *Enforcement*. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under §266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under §270.41 of this chapter.

266.105 Standards to Control Particulate Matter

(a) A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) after correction to a stack gas concentration of 7% oxygen, using procedures prescribed in 40 CFR part 60, Appendix A, methods 1 through 5, and Appendix IX of this part.

(b) An owner or operator meeting the requirements of §266.109(b) for the low risk waste exemption is exempt from the particulate matter standard.

(c) Oxygen correction. (1) Measured pollutant levels must be corrected for the amount of oxygen in the stack gas according to the formula:

$$Pc=Pm \times 14/(E - Y)$$

Where:

Pc is the corrected concentration of the pollutant in the stack gas. Pm is the measured concentration of the pollutant in the stack gas, E is the oxygen concentration on a dry basis in the combustion air fed to the device, and Y is the measured oxygen concentration on a dry basis in the stack.

(1) For devices that feed normal combustion air, E will equal 21 percent. For devices that feed oxygen-enriched air for combustion (that is, air with an oxygen concentration exceeding 21 percent), the value of E will be the concentration of oxygen in the enriched air.

(2) Compliance with all emission standards provided by this subpart must be based on correcting to 7 percent oxygen using this procedure.

(d) For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.106 Standards to Control Metals Emissions.

(a) *General*. The owner or operator must comply with the metals standards provided by paragraphs (b), (c), (d), (e), or (f) of this section for each metal listed in paragraph (b) of this section that is present in the hazardous waste at detectable levels by using appropriate analytical procedures.

(b) *Tier I feed rate screening limits*. Feed rate screening limits for metals are specified in Appendix I of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (b)(7) of this section.

(1) *Noncarcinogenic metals*. The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the screening limits specified in Appendix I of this part.

(i) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:

(A) An hourly rolling average as defined in Section 266.102(e)(6)(i)(B); or

(B) An instantaneous limit not to be exceeded at any time.

(ii) The feed rate screening limit for lead is based on one of the following:

(A) An hourly rolling average as defined in Section 266.102(e)(6)(i)(B);

(B) An averaging period of 2 to 24 hours as defined in Section 266.102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis; or

(C) An instantaneous limit not to be exceeded at any time.

(2) *Carcinogenic metals*.

(i) The feed rates of arsenic, cadmium, beryllium, and chromium in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed values derived from the screening limits specified in Appendix I of this part.
The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in Appendix I shall not exceed 1.0 as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals
AFR = actual feed rate to the device for metal "i"
FRSL = feed rate screening limit provided by Appendix I of this part for metal "i".

(ii) The feed rate screening limits for the carcinogenic metals are based on either:
(A) An hourly rolling average; or
(B) An averaging period of 2 to 24 hours as defined in Section 266.102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

(3) *TESH*.
(i) The terrain-adjusted effective stack height is determined according to the following equation:

TESH=Ha+H1-Tr

where:
Ha = Actual physical stack height
H1 = Plume rise as determined from Appendix VI of this part as a function of stack flow rate and stack gas exhaust temperature.
Tr = Terrain rise within five kilometers of the stack.

(ii) The stack height (Ha) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).
(iii) If the TESH for a particular facility is not listed in the table in the appendices, the nearest lower TESH listed in the table shall be used. If the TESH is four meters or less, a value of four meters shall be used.

(4) *Terrain type*. The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within 5 kilometers of the stack equals or exceeds the elevation of the physical stack height (Ha) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. Geological Survey 7.5-minute topographic maps of the area surrounding the facility.

(5) *Land use*. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in Appendices IX or X of this part shall be used.

(6) *Multiple stacks*. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a RCRA operating permit or interim status controls must comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

K = HVT

Where:
K = a parameter accounting for relative influence of stack height and plume rise;
H = physical stack height (meters);
V = stack gas flow rate (m^3/second); and
T = exhaust temperature (°K).

The stack with the lowest value of K is the worst-case stack.

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

(i) The device is located in a narrow valley less than one kilometer wide;

(ii) The device has a stack taller than 20 meters and is located such that the terrain rises to the physical height within one kilometer of the facility;

(iii) The device has a stack taller than 20 meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;

(iv) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or

(v) The Director determines that standards based on site-specific dispersion modeling are required.

(8) *Implementation*. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate screening limits are not exceeded.

(c) *Tier II Emission Rate Screening Limits*. Emission rate screening limits are specified in Appendix I as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (b)(7) of this section.

(1) *Noncarcinogenic Metals*. The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in Appendix I of this part.

(2) *Carcinogenic Metals*. The emission rates of arsenic, cadmium, beryllium, and chromium shall not exceed values derived from the screening limits specified in Appendix I of this part. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in Appendix I shall not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AER_{(i)}}{ERSL_{(i)}} \leq 1.0$$

where:
n = number of carcinogenic metals
AER = actual emission rate for metal "i"
ERSL = emission rate screening limit provided by Appendix I of this part for metal "i".

(3) *Implementation*. The emission rate limits must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs (b)(1)(i) and (ii) and (b)(2)(ii) of this section. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under Sections 266.102 or 266.103 are not exceeded.

(4) *Definitions and Limitations*. The definitions and limitations provided by paragraph (b) of this section for the following terms also apply to the Tier II emission rate screening limits provided by paragraph (c) of this section: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(5) *Multiple Stacks.*

(i) Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(ii) The worst-case stack is determined by procedures provided in paragraph (b)(6) of this section.

(iii) For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

(d) *Tier III And Adjusted Tier I Site-specific Risk Assessment*. The requirements of this paragraph apply to facilities complying with either the Tier III or Adjusted Tier I controls, except where specified otherwise.

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

(2) *Acceptable Ambient Levels*. Appendices IV and V of this part list the acceptable ambient levels for purposes of this rule. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and 10^{-5} risk-specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in paragraph (d)(3) of this section.

(3) *Carcinogenic metals*. For the carcinogenic metals, arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average off-site ground level concentrations (except that on-site concentrations must be considered if a person resides on site) to the risk-specific dose (RSD) for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation:

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

where: n = number of carcinogenic metals

(4) *Noncarcinogenic Metals*. For the noncarcinogenic metals, the predicted maximum annual average off-site ground level concentration for each metal shall not exceed the reference air concentration (RAC).

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

(6) *Implementation*. Under Tier III, the metals controls must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs (b)(1)(i) and (ii) and (b)(2)(ii) of this section. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under §§266.102 or 266.103 are not exceeded.

(e) *Adjusted Tier I Feed Rate Screening Limits*. The owner or operator may adjust the feed rate screening limits provided by Appendix I of this part to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by Appendices IV and V of this part using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in paragraph (b)(2) of this section.

(f) *Alternative Implementation Approaches*.

(1) The Director may approve on a case-by-case basis approaches to implement the Tier II or Tier III metals emission limits provided by paragraphs (c) or (d) of this section alternative to monitoring the feed rate of metals in each feedstream.

(2) The emission limits provided by paragraph (d) of this section must be determined as follows:

(i) For each noncarcinogenic metal, by back-calculating from the RAC provided in Appendix IV of this part to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Paragraph (h) of this section; and

(ii) For each carcinogenic metal by:

(A) Back-calculating from the RSD provided in Appendix V of this part to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted

using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Paragraph (h) of this section; and

(B) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by Paragraph (f)(2)(ii)(A) of this section such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by that paragraph does not exceed 1.0.

(g) *Emissions Testing*.

(1) *General*. Emissions testing for metals shall be conducted using Method 0060, Determinations of Metals in Stack Emissions, EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter.

(2) *Hexavalent Chromium*. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in Method 0061, Determination of Hexavalent Chromium Emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter.

(h) *Dispersion Modeling*. Dispersion modeling required under this section shall be conducted according to methods recommended in Appendix X of this part, the "Hazardous Waste Combustion Air Quality Screening Procedure" described in Appendix IX of this part, or "EPA SCREEN Screening Procedure" as described in Screening Procedures for Estimating Air Quality Impact of Stationary Sources (the latter document is incorporated by reference, see Section 260.11) to predict the maximum annual average off-site ground level concentration. However, on-site concentrations must be considered when a person resides on-site.

(i) *Enforcement*. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.107 Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl_2) Emissions.

(a) *General*. The owner or operator must comply with the hydrogen chloride (HCl) and chlorine (Cl_2) controls provided by paragraph (b), (c), or (e) of this section.

(b) *Screening Limits*--

(1) *Tier I Feed Rate Screening Limits*. Feed rate screening limits are specified for total chlorine in Appendix II of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the levels specified.

(2) *Tier II Emission Rate Screening Limits*. Emission rate screening limits for HCl and Cl_2 are specified in Appendix III of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of HCl and Cl_2 shall not exceed the levels specified.

(3) *Definitions and Limitations*. The definitions and limitations provided by Section 266.106(b) for the following terms also apply to the screening limits provided by this paragraph: Terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(4) *Multiple Stacks*. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under a RCRA operating permit or interim status controls must comply with the Tier I and Tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(i) The worst-case stack is determined by procedures provided in Section 266.106(b)(6).

(ii) Under Tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.

(iii) Under Tier II, the total emissions of HCl and CL_2 from all subject stacks shall not exceed the screening limit for the worst-case stack.

(c) *Tier III Site-specific Risk Assessments*--

(1) *General*. Conformance with the Tier III controls must be demonstrated by emissions testing to determine the emission rate for HCl and Cl_2, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

(2) *Acceptable Ambient Levels*. Appendix IV of this part lists the reference air concentrations (RACs) for HCl (7 micrograms per cubic meter) and Cl_2 (0.4 micrograms per cubic meter).

(3) *Multiple Stacks*. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under a RCRA operating permit or interim status controls must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels for HCl and CL_2.

(d) *Averaging Periods*. The HCl and Cl_2 controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feed stocks. Under Tier I, the feed rate of total chloride and chlorine is limited to the Tier I Screening Limits. Under Tier II and Tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate limits are based on either:

(1) An hourly rolling average as defined in Section 266.102(e)(6); or

(2) An instantaneous basis not to be exceeded at any time.

(e) *Adjusted Tier I feed rate screening limits*. The owner or operator may adjust the feed rate screening limit provided by Appendix II of this part to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for Cl_2 provided by Appendix IV of this part using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit.

(f) *Emissions testing*. Emissions testing for HCl and Cl_2 shall be conducted using the procedures described in Methods 0050 or 0051, EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter.

(g) *Dispersion modeling*. Dispersion modeling shall be conducted according to the provisions of Section 266.106(h).

(h) "Enforcement." For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.108 <u>Small quantity on-site burner exemption</u>.

(a) *Exempt quantities*. Owners and operators of facilities that burn hazardous waste in an on-site boiler or industrial furnace are exempt from the requirements of this subpart provided that:

(1) The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain-adjusted effective stack height as defined in Section 266.106(b)(3):

EXEMPT QUANTITIES FOR SMALL QUANTITY BURNER EXEMPTION

Terrain-adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/month)	Terrain- adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate(gallons/ month)
0 to 3.9	0	40.0 to 44.9	210
4.0 to 5.9	13	45.0 to 49.9	260
6.0 to 7.9	18	50.0 to 54.9	330
8.0 to 9.9	27	55.0 to 59.9	400
10.0 to 11.9	40	60.0 to 64.9	490
12.0 to 13.9	48	65.0 to 69.9	610
14.0 to 15.9	59	70.0 to 74.9	680
16.0 to 17.9	69	75.0 to 79.9	760
18.0 to 19.9	76	80.0 to 84.9	850
20.0 to 21.9	84	85.0 to 89.9	960
22.0 to 23.9	93	90.0 to 94.9	1,100
24.0 to 25.9	100	95.0 to 99.9	1,200
26.0 to 27.9	110	100.0 to 104.9	1,300
28.0 to 29.9	130	105.0 to 109.9	1,500
30.0 to 34.9	140	110.0 to 114.9	1,700
35.0 to 39.9	170	115.0 or greater	1,900

(2) The maximum hazardous waste firing rate does not exceed at any time 1 percent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste.

(3) The hazardous waste has a minimum heating value of 5,000 Btu/lb., as generated; and

(4) The hazardous waste fuel does not contain (and is not derived from) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(b) *Mixing with nonhazardous fuels*. If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with paragraph (a).

(c) *Multiple stacks*. If an owner or operator burns hazardous waste in more than one on-site boiler or industrial furnace exempt under this section, the quantity limits provided by paragraph (a)(1) of this section are implemented according to the following equation:

$$\sum_{i=1}^{n} \frac{Actual\ Quantity\ Burned_{(i)}}{Allowable\ Quantity\ Burned_{(i)}} \leq 1.0$$

where:
n means the number of stacks;
Actual Quantity Burned means the waste quantity burned per month in device "i";
Allowable Quantity Burned means the maximum allowable exempt quantity for stack "i" from the table in (a)(1) above.

Note: Hazardous wastes that are subject to the special requirements for small quantity generators under Section 261.5 of this chapter may be burned in an off-site device under the exemption provided by Section 266.108, but must be included in the quantity determination for the exemption.

(d) *Notification requirements*. The owner or operator of facilities qualifying for the small quantity burner exemption under this section must provide a one-time signed, written notice to EPA indicating the following:

(1) The combustion unit is operating as a small quantity burner of hazardous waste;

(2) The owner and operator are in compliance with the requirements of this section; and

(3) The maximum quantity of hazardous waste that the facility may burn per month as provided by Section 266.108(a)(1).

(e) *Recordkeeping requirements*. The owner or operator must maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits of this section. At a minimum, these records must indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

266.109 Low risk waste exemption.

(a) *Waiver of DRE standard*. The DRE standard of §266.104(a) does not apply if the boiler or industrial furnace is operated in conformance with (a)(1) of this section and the owner or operator demonstrates by procedures prescribed in (a)(2) of this section that the burning will not result in unacceptable adverse health effects.

(1) The device shall be operated as follows:

(i) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(ii) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb;

(iii) The hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and

(iv) The device operates in conformance with the carbon monoxide controls provided by Section 266.104(b)(1). Devices subject to the exemption provided by this section are not eligible for the alternative carbon monoxide controls provided by Section 266.104(c).

(2) Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health affects are as follows:

(i) Identify and quantify those nonmetal compounds listed in Appendix VIII, part 261 of this chapter that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained;

(ii) Calculate reasonable, worst case emission rates for each constituent identified in paragraph (a)(2)(i) of this section by assuming the device achieves 99.9 percent destruction and removal efficiency. That is, assume that 0.1 percent of the mass weight of each constituent fed to the device is emitted.

(iii) For each constituent identified in paragraph (a)(2)(i) of this section, use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.

(A) Dispersion modeling shall be conducted using methods specified in Section 266.106(h).

(B) Owners and operators of facilities with more than one on-site stack from a boiler or industrial furnace that is exempt under this section must conduct dispersion modeling of emissions from all stacks exempt under this section to predict ambient levels prescribed by this paragraph.

(iv) Ground level concentrations of constituents predicted under paragraph (a)(2)(iii) of this section must not exceed the following levels:

(A) For the noncarcinogenic compounds listed in Appendix IV of this part, the levels established in Appendix IV;

(B) For the carcinogenic compounds listed in Appendix V of this part, the sum for all constituents of the ratios of the actual ground level concentration to the level established in Appendix V cannot exceed 1.0; and

(C) For constituents not listed in Appendix IV or V, 0.1 micrograms per cubic meter.

(b) *Waiver of particulate matter standard*. The particulate matter standard of Section 266.105 does not apply if:

(1) The DRE standard is waived under paragraph (a) of this section; and

(2) The owner or operator complies with the Tier I or adjusted Tier I metals feed rate screening limits provided by Section 266.106(b) or (e).

266.110 Waiver of DRE trial burn for boilers.

Boilers that operate under the special requirements of this section, and that do not burn hazardous waste containing (or derived from) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027, are considered to be in conformance with the DRE standard of Section 266.104(a), and a trial burn to demonstrate DRE is waived. When burning hazardous waste:

(a) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(b) Boiler load shall not be less than 40 percent. Boiler load is the ratio at any time of the total heat input to the maximum design heat input;

(c) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb, and each material fired in a burner where hazardous waste is fired must have a heating value of at least 8,000 Btu/lb, as-fired;

(d) The device shall operate in conformance with the carbon monoxide standard provided by Section 266.104(b)(1). Boilers subject to the waiver of the DRE trial burn provided by this section are not eligible for the alternative carbon monoxide standard provided by Section 266.104(c);

(e) The boiler must be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and

(f) The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under the following conditions:

(1) *Viscosity*. The viscosity of the hazardous waste fueled as-fired shall not exceed 300 SSU;

(2) *Particle size*. When a high pressure air or steam atomizer, low pressure atomizer, or mechanical atomizer is used, 70% of the hazardous waste fuel must pass through a 200 mesh (74 micron) screen, and when a rotary cup atomizer is used, 70% of the hazardous waste must pass through a 100 mesh (150 micron) screen;

(3) *Mechanical atomization systems*. Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of the fuel;

(4) *Rotary cup atomization systems*. Fuel flow rate through a rotary cup atomization system must be maintained within the design range taking into account the viscosity and volatility of the fuel.

266.111 Standards for direct transfer.

(a) *Applicability*. The regulations in this section apply to owners and operators of boilers and industrial furnaces subject to §§266.102 or 266.103 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

(b) *Definitions*.

(1) When used in this section, the following terms have the meanings given below:

Direct transfer equipment means any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (i.e., transport vehicle) and a boiler or industrial furnace.

Container means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (e.g., tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

(2) This section references several requirements provided in subparts I and J of parts 264 and 265. For purposes of this section, the term "tank systems" in those referenced requirements means direct transfer equipment as defined in paragraph (b)(1) of this section.

(c) *General operating requirements.*

(1) No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.

(2) Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

(3) The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:

(i) Generate extreme heat or pressure, fire, explosion, or violent reaction;

(ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

(iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(iv) Damage the structural integrity of the container or direct transfer equipment containing the waste;

(v) Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by Sections 266.104 through 266.107; or

(vi) Threaten human health or the environment.

(4) Hazardous waste shall not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.

(5) The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:

(i) Spill prevention controls (e.g., check valves, dry discount couplings); and

(ii) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.

(d) *Areas where direct transfer vehicles (containers) are located.* Applying the definition of container under this section, owners and operators must comply with the following requirements:

(1) The containment requirements of Section 264.175 of this chapter;

(2) The use and management requirements of subpart I, part 265 of this chapter, except for Sections 265.170 and 265.174; and except that in lieu of the special requirements of Section 265.176 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code," (1977 or 1981), (incorporated by reference, see Section 260.11). The owner or operator must obtain and keep on file at the facility a written certification by the local Fire Marshall that the installation meets the subject NFPA codes; and

(3) The closure requirements of Section 264.178 of this chapter.

(e) *Direct transfer equipment*. Direct transfer equipment must meet the following requirements:

(1) *Secondary containment*. Owners and operators shall comply with the secondary containment requirements of Section 265.193 of this chapter, except for paragraphs 265.193(a), (d), (e), and (i) as follows:

(i) For all new direct transfer equipment, prior to their being put into service; and

(ii) For existing direct transfer equipment within 2 years after August 21, 1991.

(2) *Requirements prior to meeting secondary containment requirements.*

(i) For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with Section 270.11(d) of this chapter that attests to the equipment's integrity by August 21, 1992.

(ii) This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

(A) Design standard(s), if available, according to which the direct transfer equipment was constructed;

(B) Hazardous characteristics of the waste(s) that have been or will be handled;

(C) Existing corrosion protection measures;

(D) Documented age of the equipment, if available, (otherwise, an estimate of the age); and

(E) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.

(iii) If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of Sections 265.196(a) and (b) of this chapter.

(3) *Inspections and recordkeeping.*

(i) The owner or operator must inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace:

(A) Overall/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;

(B) The above ground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (e.g., wet spots, dead vegetation); and

(C) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.

(ii) The owner or operator must inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by Section 265.195(b) of this chapter;

(iii) Records of inspections made under this paragraph shall be maintained in the operating record at the facility, and available for inspection for at least 3 years from the date of the inspection.

(4) *Design and installation of new ancillary equipment*. Owners and operators must comply with the requirements of Section 265.192 of this chapter.

(5) *Response to leaks or spills*. Owners and operators must comply with the requirements of Section 265.196 of this chapter.

(6) *Closure*. Owners and operators must comply with the requirements of Section 265.197 of this chapter, except for Section 265.197(c)(2) through (c)(4).

266.112 Regulation of residues.

A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under §261.4(b)(4), (7), or (8) unless the device and the owner or operator meet the following requirements:

(a) The device meets the following criteria:

(1) *Boilers*. Boilers must burn at least 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal;

(2) *Ore or mineral furnaces*. Industrial furnaces subject to §261.4(b)(7) must process at least 50% by weight normal, nonhazardous raw materials;

(3) *Cement kilns*. Cement kilns must process at least 50% by weight normal cement-production raw materials;

(b) The owner or operation demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:

(1) *Comparison of waste-derived residue with normal residue*. The waste-derived residue must not contain appendix VIII, part 261 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in appendix VIII of this part that may be generated as products of incomplete combustion. For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2, 3, 7, 8-TCDD equivalent values using the procedure specified in section 4.0 of appendix IX of this part.

(i) *Normal residue*. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed 24 hours. The upper tolerance limit (at 95% confidence with a 95% proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically-derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically-derived concentrations of the toxic constituents of concern in the normal residue, the statistically-derived concentrations must be revised or statistically derived concentrations of toxic constituents in normal residue must be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Bevill Residue Determinations" in Appendix IX of this part.

(ii) *Waste-derived residue*. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under paragraph (b)(1)(i) of this section. If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste.

Concentrations of toxic constituents of concern in waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24 hour period, the concentration of each toxic constituent shall be the arithmethic mean of the concentrations in the samples. No results may be disregarded; or

(2) *Comparison of waste-derived residue concentrations with health-based limits--*

(i) *Nonmetal constituents*. The concentration of each nonmetal toxic constituent of concern (specified in paragraph (b)(1) of this section) in the waste-derived residue must not exceed the health-based level specified in appendix VII of this part, or the level of detection, whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection (which must be determined by using appropriate analytical procedures), whichever is higher, must be used. The levels specified in appendix VII of this part (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of appendix VII of this chapter) are administratively stayed under the condition, for those constituents specified in paragraph (b)(1) of this section, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in §268.43 of this chapter for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable Agency guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by §268.43 of this chapter for F039 nonwastewaters. In complying with the §268.43 of this chapter F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans.

Note to this paragraph (b)(2)(i): The administrative stay, under the condition that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in §268.43 of this chapter for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published in the Federal Register and the Code of Federal Regulations.

(ii) *Metal constituents*. The concentration of metals in an extract obtained using the Toxicity Characteristic Leaching Procedure of Section 261.24 of this chapter must not exceed the levels specified in Appendix VII of this part; and

(iii) *Sampling and analysis*. Waste derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; and

(c) Records sufficient to document compliance with the provisions of this section must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded.

(1) Levels of constituents in Appendix VIII, part 261, that are present in waste-derived residues;

(2) If the waste-derived residue is compared with normal residue under paragraph (b)(1) of this section:

(i) The levels of constituents in Appendix VIII, part 261, that are present in normal residues; and

(ii) Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

(e) 40 CFR 266.200 through 266.206 (Subpart M), "Military Munitions", are incorporated by reference including subsequent amendments and editions.

SUBPART M - MILITARY MUNITIONS

266.200 Applicability

(a) The regulations in this subpart identify when military munitions become a solid waste, and, if these wastes are also hazardous under this subpart or 40 CFR part 261, the management standards that apply to these wastes.
(b) Unless otherwise specified in this subpart, all applicable requirements in 40 CFR parts 260 through 270 apply to waste military munitions.

266.201 Definitions.

In addition to the definitions in 40 CFR 260.10, the following definitions apply to this subpart:
Active range means a military range that is currently in service and is being regularly used for range activities.
Chemical agents and munitions are defined as in 50 U.S.C. section 1521(j)(1).
Director is as defined in 40 CFR 270.2.
Explosives or munitions emergency response specialist is as defined in 40 CFR 260.10.
Explosives or munitions emergency is as defined in 40 CFR 260.10.
Explosives or munitions emergency response is as defined in 40 CFR 260.10.
Inactive range means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.
Military means the Department of Defense (DOD), the Armed Services, Coast Guard, National Guard, Department of Energy (DOE), or other parties under contract or acting as an agent for the foregoing, who handle military munitions.
Military munitions is as defined in 40 CFR 260.10.
Military range means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.
Unexploded ordnance (UXO) means military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

266.202 Definition of solid waste.

(a) A military munition is not a solid waste when:
  (1) Used for its intended purpose, including:
    (i) Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions); or
    (ii) Use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or
    (iii) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.
  (2) An unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal as defined in 40 CFR 261.2(c)(1), or burning for energy recovery as defined in 40 CFR 261.2(c)(2).
(b) An unused military munition is a solid waste when any of the following occurs:
  (1) The munition is abandoned by being disposed of, burned, detonated (except during intended use as specified in paragraph (a) of this section), incinerated, or treated prior to disposal; or
  (2) The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal, or

(3) The munition is deteriorated or damaged (e.g., the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes; or

(4) The munition has been declared a solid waste by an authorized military official.

(c) A used or fired military munition is a solid waste:

(1) When transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or

(2) If recovered, collected, and then disposed of by burial, or landfilling either on or off a range.

(d) For purposes of RCRA section 1004(27), a used or fired military munition is a solid waste, and therefore, is potentially subject to RCRA corrective action authorities under sections 3004(u) and (v), and 3008(h), or imminent and substantial endangerment authorities under section 7003, if the munition lands off-range and is not promptly rendered safe and/or retrieved. Any imminent and substantial threats associated with any remaining material must be addressed. If remedial action is infeasible, the operator of the range must maintain a record of the event for as long as any threat remains. The record must include the type of munition and its location (to the extent the location is known).

266.203 <u>Standards applicable to the transportation of solid waste military munitions.</u>

(a) *Criteria for hazardous waste regulation of waste non-chemical military munitions in transportation.*

(1) Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under 40 CFR part 261, are listed or identified as a hazardous waste (and thus are subject to regulation under 40 CFR parts 260 through 270), unless all the following conditions are met:

(i) The waste military munitions are not chemical agents or chemical munitions;

(ii) The waste military munitions must be transported in accordance with the Department of Defense shipping controls applicable to the transport of military munitions;

(iii) The waste military munitions must be transported from a military owned or operated installation to a military owned or operated treatment, storage, or disposal facility; and

(iv) The transporter of the waste must provide oral notice to the Director within 24 hours from the time the transporter becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of paragraph (a)(1) of this section that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within 5 days from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of paragraph (a)(1) of this section.

(2) If any waste military munitions shipped under paragraph (a)(1) of this section are not received by the receiving facility within 45 days of the day the waste was shipped, the owner or operator of the receiving facility must report this non-receipt to the Director within 5 days.

(3) The exemption in paragraph (a)(1) of this section from regulation as hazardous waste shall apply only to the transportation of non-chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to storage, treatment or disposal.

(4) The conditional exemption in paragraph (a)(1) of this section applies only so long as all of the conditions in paragraph (a)(1) of this section are met.

(b) *Reinstatement of exemption*. If any waste military munition loses its exemption under paragraph (a)(1) of this section, an application may be filed with the Director for reinstatement of the exemption from hazardous waste transportation regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of paragraph (a)(1) of this section. If the Director finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the Director may reinstate the exemption under paragraph (a)(1) of this section. If the Director does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the Director may terminate a conditional exemption reinstated by default in the preceding sentence if the Director finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under paragraph (a)(1) of this section, the Director may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.

(c) *Amendments to DOD shipping controls*. The Department of Defense shipping controls applicable to the transport of military munitions referenced in paragraph (a)(1)(ii) of this section are Government Bill of Lading (GBL) (GSA Standard Form 1109), requisition tracking form DD Form 1348, the Signature and Talley Record (DD Form 1907), Special Instructions for Motor Vehicle Drivers (DD Form 836), and the Motor Vehicle Inspection Report (DD Form 626) in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the

Department of Defense shipping controls shall become effective for purposes of paragraph (a)(1) of this section on the date the Department of Defense publishes notice in the Federal Register that the shipping controls referenced in paragraph (a)(1)(ii) of this section have been amended.

266.204 Standards applicable to emergency responses.

Explosives and munitions emergencies involving military munitions or explosives are subject to 40 CFR 262.10(i), 263.10(e), 264.1(g)(8), 265.1(c)(11), and 270.1(c)(3), or alternatively to 40 CFR 270.61.

266.205 Standards applicable to the storage of solid waste military munitions.

(a) *Criteria for hazardous waste regulation of waste non-chemical military munitions in storage.*
  (1) Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste under 40 CFR Part 261, are listed or identified as a hazardous waste (and thus are subject to regulation under 40 CFR Parts 260 through 279), unless all the following conditions are met:
    (i) The waste military munitions are not chemical agents or chemical munitions.
    (ii) The waste military munitions must be subject to the jurisdiction of the Department of Defense Explosives Safety Board (DDESB).
    (iii) The waste military munitions must be stored in accordance with the DDESB storage standards applicable to waste military munitions.
    (iv) Within 90 days of August 12, 1997 or within 90 days of when a storage unit is first used to store waste military munitions, whichever is later, the owner or operator must notify the Director of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in paragraph (a)(1) is claimed.
    (v) The owner or operator must provide oral notice to the Director within 24 hours from the time the owner or operator becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of paragraph (a)(1) that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within 5 days from the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of paragraph (a)(1) of this section.
    (vi) The owner or operator must inventory the waste military munitions at least annually, must inspect the waste military munitions at least quarterly for compliance with the conditions of paragraph (a)(1) of this section, and must maintain records of the findings of these inventories and inspections for at least three years.
    (vii) Access to the stored waste military munitions must be limited to appropriately trained and authorized personnel.
  (2) The conditional exemption in paragraph (a)(1) of this section from regulation as hazardous waste shall apply only to the storage of non-chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment or disposal
  (3) The conditional exemption in paragraph (a)(1) of this section applies only so long as all of the conditions in paragraph (a)(1) of this section are met.

(b) Notice of termination of waste storage. The owner or operator must notify the Director when a storage unit identified in paragraph (a)(1)(iv) of this section will no longer be used to store waste military munitions.

(c) Reinstatement of conditional exemption. If any waste military munition loses its conditional exemption under paragraph (a)(1) of this section, an application may be filed with the Director for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of paragraph (a)(1) of this section. If the Director finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the Director may reinstate the conditional exemption under paragraph (a)(1) of this section. If the Director does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the Director may terminate a conditional exemption reinstated by default in the preceding sentence if he/she finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under paragraph (a)(1) of this section, the Director may specify additional conditions as are necessary to ensure and document proper storage to protect human health and the environment.

(d) Waste chemical munitions.

(1) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under 40 CFR Part 261, are listed or identified as a hazardous waste and shall be subject to the applicable regulatory requirements of RCRA subtitle C.

(2) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under 40 CFR Part 261, are not subject to the storage prohibition in RCRA section 3004(j), codified at 40 CFR 268.50.

(e) Amendments to DDESB storage standards. The DDESB storage standards applicable to waste military munitions, referenced to paragraph (a)(1)(iii) of this section, are DOD 6055.9-STD ("DOD Ammunition and Explosive Safety Standards"), in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the DDESB storage standards shall become effective for purposes of paragraph (a0(1) of this section on the date the Department of Defense publishes notice in the Federal Register that the DDESB standards referenced in paragraph (a)(1) of this section have been amended.

266.206 Standards applicable to the treatment and disposal of waste military munitions.

The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in 40 CFR Parts 260 through 270.

(f) 40 CFR 266.210 through 266.360 (Subpart N), “Conditional Exemption for Low-Level Mixed Waste Storage, Treatment, Transportation and Disposal”, are incorporated by reference including subsequent amendments and editions.

SUBPART N--CONDITIONAL EXEMPTION FOR LOW-LEVEL MIXED WASTE STORAGE, TREATMENT, TRANSPORTATION AND DISPOSAL

Terms

266.210 What definitions apply to this subpart?

This subpart uses the following special definitions:

Agreement State means a state that has entered into an agreement with the NRC under subsection 274b of the Atomic Energy Act of 1954, as amended (68 Stat. 919), to assume responsibility for regulating within its borders byproduct, source, or special nuclear material in quantities not sufficient to form a critical mass.

Certified delivery means certified mail with return receipt requested, or equivalent courier service, or other means,that provides the sender with a receipt confirming delivery.

Director refers to the definition in 40 CFR 270.2.

Eligible Naturally Occurring and/or Accelerator-produced Radioactive Material (NARM) is NARM that is eligible for the Transportation and Disposal Conditional Exemption. It is a NARM waste that contains RCRA hazardous waste, meets the waste acceptance criteria of, and is allowed by State NARM regulations to be disposed of at a low-level radioactive waste disposal facility (LLRWDF) licensed in accordance with 10 CFR part 61 or NRC Agreement State equivalent regulations.

Exempted waste means a waste that meets the eligibility criteria in 266.225 and meets all of the conditions in §266.230, or meets the eligibility criteria in 40 CFR 266.310 and complies with all the conditions in §266.315. Such waste is conditionally exempted from the regulatory definition of hazardous waste described in 40 CFR 261.3.

Hazardous Waste means any material which is defined to be hazardous waste in accordance with 40 CFR 261.3, "Definition of Hazardous Waste."

Land Disposal Restriction (LDR) Treatment Standards means treatment standards, under 40 CFR part 268, that a RCRA hazardous waste must meet before it can be disposed of in a RCRA hazardous waste land disposal unit.

License means a license issued by the Nuclear Regulatory Commission, or NRC Agreement State, to users that manage radionuclides regulated by NRC, or NRC Agreement States, under authority of the Atomic Energy Act of 1954, as amended.

Low-Level Mixed Waste (LLMW) is a waste that contains both low-level radioactive waste and RCRA hazardous waste.

Low-Level Radioactive Waste (LLW) is a radioactive waste which contains source, special nuclear, or byproduct material, and which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act. (See also NRC definition of "waste" at 10 CFR 61.2)

Mixed Waste means a waste that contains both RCRA hazardous waste and source, special nuclear, or byproduct material subject to the Atomic Energy Act of 1954, as amended.

Naturally Occurring and/or Accelerator-produced Radioactive Material (NARM) means radioactive materials that:

(1) Are naturally occurring and are not source, special nuclear, or by product materials (as defined by the AEA) or
(2) Are produced by an accelerator. NARM is regulated by the States under State law, or by DOE (as authorized by the AEA) under DOE orders.

NRC means the U. S. Nuclear Regulatory Commission.

We or us within this subpart, means the Director as defined in 40 CFR 270.2.

You means a generator, treater, or other handler of low-level mixed waste or eligible NARM.

Storage and Treatment Conditional Exemption and Eligibility

266.220 What does a storage and treatment conditional exemption do?

The storage and treatment conditional exemption exempts your low-level mixed waste from the regulatory definition of hazardous waste in 40 CFR 261.3 if your waste meets the eligibility criteria in §266.225 and you meet the conditions in §266.230.

266.225 What wastes are eligible for the storage and treatment conditional exemption?

Low-level mixed waste (LLMW), defined in §266.210, is eligible for this conditional exemption if it is generated and managed by you under a single NRC or NRC Agreement State license. (Mixed waste generated at a facility with a different license number and shipped to your facility for storage or treatment requires a permit and is ineligible for this exemption. In addition, NARM waste is ineligible this exemption.)

266.230 What conditions must you meet for your LLMW to qualify for and maintain a storage and treatment exemption?

(a) For your LLMW to qualify for the exemption you must notify us in writing by certified delivery that you are claiming a conditional exemption for the LLMW stored on your facility. The dated notification must include your name, address, RCRA identification number, NRC or NRC Agreement State license number, the waste code(s) and storage unit(s) for which you are seeking an exemption, and a statement that you meet the conditions of this subpart. Your notification must be signed by your authorized representative who certifies that the information in the notification is true, accurate, and complete. You must notify us of your claim either within 90 days of the effective date of this rule in your State, or within 90 days of when a storage unit is first used to store conditionally exempt LLMW.

(b) To qualify for and maintain an exemption for your LLMW you must:

(1) Store your LLMW waste in tanks or containers in compliance with the requirements of your license that apply to the proper storage of low-level radioactive waste (not including those license requirements that relate solely to recordkeeping);

(2) Store your LLMW in tanks or containers in compliance with chemical compatibility requirements of a tank or container in 40 CFR 264.177, or 264.199 or 40 CFR 265.177, or 265.199;

(3) Certify that facility personnel who manage stored conditionally exempt LLMW are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards found in 40 CFR 265.16(a)(3);

(4) Conduct an inventory of your stored conditionally exempt LLMW at least annually and inspect it at least quarterly for compliance with subpart N of this part; and

(5) Maintain an accurate emergency plan and provide it to all local authorities who may have to respond to a fire, explosion, or release of hazardous waste or hazardous constituents. Your plan must describe emergency response arrangements with local authorities; describe evacuation plans; list the names, addresses, and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators; and list emergency equipment.

Treatment

266.235 What waste treatment does the storage and treatment conditional exemption allow?

You may treat your low-level mixed waste at your facility within a tank or container in accordance with the terms of your NRC or NRC Agreement State license. Treatment that cannot be done in a tank or container without a RCRA permit (such as incineration) is not allowed under this exemption.

Loss of Conditional Exemption

266.240 How could you lose the conditional exemption for your LLMW and what action must you take?

(a) Your LLMW will automatically lose the storage and treatment conditional exemption if you fail to meet any of the conditions specified in §266.230. When your LLMW loses the exemption, you must immediately manage that waste which failed the condition as RCRA hazardous waste, and the storage unit storing the LLMW immediately becomes subject to RCRA hazardous waste container and/or tank storage requirements.

(1) If you fail to meet any of the conditions specified in §266.230 you must report to us and the NRC, or the oversight agency in the NRC Agreement State, in writing by certified delivery within 30 days of learning of the failure. Your report must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

(i) The specific condition(s) you failed to meet;

(ii) A description of the LLMW (including the waste name, hazardous waste codes and quantity) and storage location at the facility; and

(iii) The date(s) on which you failed to meet the condition(s).

(2) If the failure to meet any of the conditions may endanger human health or the environment, you must also immediately notify us orally within 24 hours and follow up with a written notification within five days. Failures that may endanger human health or the environment include, but are not limited to, discharge of a CERCLA reportable quantity or other leaking or exploding tanks or containers, or detection of radionuclides above background or hazardous constituents in the leachate collection system of a storage area. If the failure may endanger human health or the environment, you must follow the provisions of your emergency plan.

(b) We may terminate your conditional exemption for your LLMW, or require you to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement(s) of subpart N of this part.

266.245 <u>If you lose the storage and treatment conditional exemption for your LLMW, can the exemption be reclaimed?</u>

(a) You may reclaim the storage and treatment exemption for your LLMW if:

(1) You again meet the conditions specified in §266.230; and

(2) You send us a notice by certified delivery that you are reclaiming the exemption for your LLMW. Your notice must be signed by your authorized representative certifying that the information contained in your notice is true, complete, and accurate. In your notice you must do the following:

(i) Explain the circumstances of each failure.

(ii) Certify that you have corrected each failure that caused you to lose the exemption for your LLMW and that you again meet all the conditions as of the date you specify.

(iii) Describe plans that you have implemented, listing specific steps you have taken, to ensure the conditions will be met in the future.

(iv) Include any other information you want us to consider when we review your notice reclaiming the exemption.

(b) We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to, the following: you have failed to correct the problem; you explained the circumstances of the failure unsatisfactorily; or you failed to implement a plan with steps to prevent another failure to meet the conditions of §266.230. In reviewing a reclaimed conditional exemption under this section, we may add conditions to the exemption to ensure that waste management during storage and treatment of the LLMW will protect human health and the environment.

Recordkeeping

266.250 <u>What records must you keep at your facility and for how long?</u>

(a) In addition to those records required by your NRC or NRC Agreement State license, you must keep records as follows:

(1) Your initial notification records, return receipts, reports to us of failure(s) to meet the exemption conditions, and all records supporting any reclaim of an exemption;

(2) Records of your LLMW annual inventories, and quarterly inspections;

(3) Your certification that facility personnel who manage stored mixed waste are trained in safe management of LLMW including training in chemical waste management and hazardous materials incidents response; and

(4) Your emergency plan as specified in §266.230(b).

(b) You must maintain records concerning notification, personnel trained, and your emergency plan for as long as you claim this exemption and for three years thereafter, or in accordance with NRC regulations under 10 CFR part 20 (or equivalent NRC Agreement State regulations), whichever is longer. You must maintain records concerning your annual inventory and quarterly inspections for three years after the waste is sent for disposal, or in accordance with NRC regulations under 10 CFR part 20 (or equivalent NRC Agreement State regulations), whichever is longer.

Reentry Into RCRA

266.255 <u>When is your LLMW no longer eligible for the storage and treatment conditional exemption?</u>

(a) When your LLMW has met the requirements of your NRC or NRC Agreement State license for decay-in-storage and can be disposed of as non-radioactive waste, then the conditional exemption for storage no longer applies. On that date your waste is subject to hazardous waste regulation under the relevant sections of 40 CFR parts 260 through 271, and the time period for accumulation of a hazardous waste as specified in 40 CFR 262.34 begins.

(b) When your conditionally exempt LLMW, which has been generated and stored under a single NRC or NRC Agreement State license number, is removed from storage, it is no longer eligible for the storage and treatment exemption. However, your waste may be eligible for the transportation and disposal conditional exemption at §266.305.

Storage Unit Closure

266.260 Do closure requirements apply to units that stored LLMW prior to the effective date of Subpart N?

Interim status and permitted storage units that have been used to store only LLMW prior to the effective date of subpart N of this part and, after that date, store only LLMW which becomes exempt under this subpart N, are not subject to the closure requirements of 40 CFR parts 264 and 265. Storage units (or portions of units) that have been used to store both LLMW and non-mixed hazardous waste prior to the effective date of subpart N or are used to store both after that date remain subject to closure requirements with respect to the non-mixed hazardous waste.

Transportation and Disposal Conditional Exemption

266.305 What does the transportation and disposal conditional exemption do?

This conditional exemption exempts your waste from the regulatory definition of hazardous waste in 40 CFR 261.3 if your waste meets the eligibility criteria under §266.310, and you meet the conditions in §266.315.

Eligibility

266.310 What wastes are eligible for the transportation and disposal conditional exemption?

Eligible waste must be:
(a) A low-level mixed waste (LLMW), as defined in §266.210, that meets the waste acceptance criteria of a LLRWDF; and/or
(b) An eligible NARM waste, defined in §266.210.

Conditions

266.315 What are the conditions you must meet for your waste to qualify for and maintain the transportation and disposal conditional exemption?

You must meet the following conditions for your eligible waste to qualify for and maintain the exemption:
(a) The eligible waste must meet or be treated to meet LDR treatment standards as described in §266.320.
(b) If you are not already subject to NRC, or NRC Agreement State equivalent manifest and transportation regulations for the shipment of your waste, you must manifest and transport your waste according to NRC regulations as described in §266.325.
(c) The exempted waste must be in containers when it is disposed of in the LLRWDF as described in §266.340.
(d) The exempted waste must be disposed of at a designated LLRWDF as described in §266.335.

266.320 What treatment standards must your eligible waste meet?

Your LLMW or eligible NARM waste must meet Land Disposal Restriction (LDR) treatment standards specified in 40 CFR part 268, subpart D.

266.325 Are you subject to the manifest and transportation condition in Sec. 266.315(b)?

If you are not already subject to NRC, or NRC Agreement State equivalent manifest and transportation regulations for the shipment of your waste, you must meet the manifest requirements under 10 CFR 20.2006 (or NRC Agreement State equivalent regulations), and the transportation requirements under 10 CFR 1.5 (or NRC Agreement State equivalent regulations) to ship the exempted waste.

266.330 When does the transportation and disposal exemption take effect?

The exemption becomes effective once all the following have occurred:
(a) Your eligible waste meets the applicable LDR treatment standards.
(b) You have received return receipts that you have notified us and the LLRWDF as described in §266.345.
(c) You have completed the packaging and preparation for shipment requirements for your waste according to NRC Packaging and Transportation regulations found under 10 CFR part 71 (or NRC Agreement State equivalent regulations); and you have prepared a manifest for your waste according to NRC manifest regulations found under 10 CFR part 20 (or NRC Agreement State equivalent regulations), and
(d) You have placed your waste on a transportation vehicle destined for a LLRWDF licensed by NRC or an NRC Agreement State.

266.335 Where must your exempted waste be disposed of?

Your exempted waste must be disposed of in a LLRWDF that is regulated and licensed by NRC under 10 CFR part 61 or by an NRC Agreement State under equivalent State regulations, including State NARM licensing regulations for eligible NARM.

266.340 What type of container must be used for disposal of exempted waste?

Your exempted waste must be placed in containers before it is disposed. The container must be:
(a) A carbon steel drum; or
(b) An alternative container with equivalent containment performance in the disposal environment as a carbon steel drum; or
(c) A high integrity container as defined by NRC.

Notification

266.345 Whom must you notify?

(a) You must provide a one time notice to us stating that you are claiming the transportation and disposal conditional exemption prior to the initial shipment of an exempted waste from your facility to a LLRWDF. Your dated written notice must include your facility name, address, phone number, and RCRA ID number, and be sent by certified delivery.
(b) You must notify the LLRWDF receiving your exempted waste by certified delivery before shipment of each exempted waste. You can only ship the exempted waste after you have received the return receipt of your notice to the LLRWDF. This notification must include the following:
    (1) A statement that you have claimed the exemption for the waste.
    (2) A statement that the eligible waste meets applicable LDR treatment standards.
    (3) Your facility's name, address, and RCRA ID number.
    (4) The RCRA hazardous waste codes prior to the exemption of the waste streams.
    (5) A statement that the exempted waste must be placed in a container according to §266.340 prior to disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption of subpart N of this part.
    (6) The manifest number of the shipment that will contain the exempted waste.
    (7) A certification that all the information provided is true, complete, and accurate. The statement must be signed by your authorized representative.

Recordkeeping

266.350 What records must you keep at your facility and for how long?

In addition to those records required by your NRC or NRC Agreement State license, you must keep records as follows:
(a) You must follow the applicable existing recordkeeping requirements under 40 CFR 264.73, 40 CFR 265.73, and 40 CFR 268.7 of this chapter to demonstrate that your waste has met LDR treatment standards prior to your claiming the exemption.
(b) You must keep a copy of all notifications and return receipts required under §266.355, and 266.360 for three years after the exempted waste is sent for disposal.

(c) You must keep a copy of all notifications and return receipts required under §266.345(a) for three years after the last exempted waste is sent for disposal.

(d) You must keep a copy of the notification and return receipt required under §266.345(b) for three years after the exempted waste is sent for disposal.

(e) If you are not already subject to NRC, or NRC Agreement State equivalent manifest and transportation regulations for the shipment of your waste, you must also keep all other documents related to tracking the exempted waste as required under 10 CFR 20.2006 or NRC Agreement State equivalent regulations, including applicable NARM requirements, in addition to the records specified in §266.350(a) through (d).

Loss of Transportation and Disposal Conditional Exemption

266.355 How could you lose the transportation and disposal conditional exemption for your waste and what actions must you take?

(a) Any waste will automatically lose the transportation and disposal exemption if you fail to manage it in accordance with all of the conditions specified in §266.315.

(1) When you fail to meet any of the conditions specified in §266.315 for any of your wastes, you must report to us, in writing by certified delivery, within 30 days of learning of the failure. Your report must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

(i) The specific condition(s) that you failed to meet for the waste;

(ii) A description of the waste (including the waste name, hazardous waste codes and quantity) that lost the exemption; and

(iii) The date(s) on which you failed to meet the condition(s) for the waste.

(2) If the failure to meet any of the conditions may endanger human health or the environment, you must also immediately notify us orally within 24 hours and follow up with a written notification within 5 days.

(b) We may terminate your ability to claim a conditional exemption for your waste, or require you to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement(s) of subpart N of this part.

266.360 If you lose the transportation and disposal conditional exemption for a waste, can the exemption be reclaimed?

(a) You may reclaim the transportation and disposal exemption for a waste after you have received a return receipt confirming that we have received your notification of the loss of the exemption specified in §266.355(a) and if:

(1) You again meet the conditions specified in §266.315 for the waste; and

(2) You send a notice, by certified delivery, to us that you are reclaiming the exemption for the waste. Your notice must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. The notice must:

(i) Explain the circumstances of each failure.

(ii) Certify that each failure that caused you to lose the exemption for the waste has been corrected and that you again meet all conditions for the waste as of the date you specify.

(iii) Describe plans you have implemented, listing the specific steps that you have taken, to ensure that conditions will be met in the future.

(iv) Include any other information you want us to consider when we review your notice reclaiming the exemption.

(b) We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to: you have failed to correct the problem; you explained the circumstances of the failure unsatisfactorily; or you failed to implement a plan with steps to prevent another failure to meet the conditions of §266.315. In reviewing a reclaimed conditional exemption under this section, we may add conditions to the exemption to ensure that transportation and disposal activities will protect human health and the environment.

(g) Appendices to 40 CFR Part 266 are incorporated by reference including subsequent amendments and editions.

APPENDIX I TO PART 266

Appendix I to Part 266 .- Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

Table I-A.-- Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

(Values for urban areas)

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4.....	6.0E+01	1.0E+04	1.8E+01	6.0E+01	6.0E+02	6.0E+01
6.....	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
8.....	7.6E+01	1.3E+04	2.3E+01	7.6E+01	7.6E+02	7.6E+01
10.....	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
12.....	9.6E+01	1.7E+04	3.0E+01	9.6E+01	9.6E+02	9.6E+01
14.....	1.1E+02	1.8E+04	3.4E+01	1.1E+02	1.1E+03	1.1E+02
16.....	1.3E+02	2.1E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
18.....	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
20.....	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
22.....	1.8E+02	3.0E+04	5.4E+01	1.8E+02	1.8E+03	1.8E+02
24.....	2.0E+02	3.4E+04	6.0E+01	2.0E+02	2.0E+03	2.0E+02
26.....	2.3E+02	3.9E+04	6.8E+01	2.3E+02	2.3E+03	2.3E+02
28.....	2.6E+02	4.3E+04	7.8E+01	2.6E+02	2.6E+03	2.6E+02
30.....	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
35.....	4.0E+02	6.6E+04	1.1E+02	4.0E+02	4.0E+03	4.0E+02
40.....	4.6E+02	7.8E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
45.....	6.0E+02	1.0E+05	1.8E+02	6.0E+02	6.0E+03	6.0E+02
50.....	7.8E+02	1.3E+05	2.3E+02	7.8E+02	7.8E+03	7.8E+02
55.....	9.6E+02	1.7E+05	3.0E+02	9.6E+02	9.6E+03	9.6E+02
60.....	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
65.....	1.5E+03	2.5E+05	4.3E+02	1.5E+03	1.5E+04	1.5E+03
70.....	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
75.....	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
80.....	2.2E+03	3.6E+05	6.4E+02	2.2E+03	2.2E+04	2.2E+03
85.....	2.5E+03	4.0E+05	7.6E+02	2.5E+03	2.5E+04	2.5E+03
90.....	2.8E+03	4.6E+05	8.2E+02	2.8E+03	2.8E+04	2.8E+03
95.....	3.2E+03	5.4E+05	9.6E+02	3.2E+03	3.2E+04	3.2E+03
100.....	3.6E+03	6.0E+05	1.1E+03	3.6E+03	3.6E+04	3.6E+03
105.....	4.0E+03	6.8E+05	1.2E+03	4.0E+03	4.0E+04	4.0E+03
110.....	4.6E+03	7.8E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
115.....	5.4E+03	8.6E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
120.....	6.0E+03	1.0E+06	1.8E+03	6.0E+03	6.0E+04	6.0E+03

Table I-B.--- Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

[Values for rural areas]

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4.....	3.1E+01	5.2E+03	9.4E+00	3.1E+01	3.1E+02	3.1E+01
6.....	3.6E+01	6.0E+03	1.1E+01	3.6E+01	3.6E+02	3.6E+01
8.....	4.0E+01	6.8E+03	1.2E+01	4.0E+01	4.0E+02	4.0E+01
10.....	4.6E+01	7.8E+03	1.4E+01	4.6E+01	4.6E+02	4.6E+01
12.....	5.8E+01	9.6E+03	1.7E+01	5.8E+01	5.8E+02	5.8E+01
14.....	6.8E+01	1.1E+04	2.1E+01	6.8E+01	6.8E+02	6.8E+01
16.....	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
18.....	1.1E+02	1.8E+04	3.2E+01	1.1E+02	1.1E+03	1.1E+02
20.....	1.3E+02	2.2E+04	4.0E+01	1.3E+02	1.3E+03	1.3E+02
22.....	1.7E+02	2.8E+04	5.0E+01	1.7E+02	1.7E+03	1.7E+02
24.....	2.2E+02	3.6E+04	6.4E+01	2.2E+02	2.2E+03	2.2E+02
26.....	2.8E+02	4.6E+04	8.2E+01	2.8E+02	2.8E+03	2.8E+02
28.....	3.5E+02	5.8E+04	1.0E+02	3.5E+02	3.5E+03	3.5E+02
30.....	4.3E+02	7.6E+04	1.3E+02	4.3E+02	4.3E+03	4.3E+02
35.....	7.2E+02	1.2E+05	2.1E+02	7.2E+02	7.2E+03	7.2E+02
40.....	1.1E+03	1.8E+05	3.2E+02	1.1E+03	1.1E+04	1.1E+03
45.....	1.5E+03	2.5E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
50.....	2.0E+03	3.3E+05	6.0E+02	2.0E+03	2.0E+04	2.0E+03
55.....	2.6E+03	4.4E+05	7.8E+02	2.6E+03	2.6E+04	2.6E+03
60.....	3.4E+03	5.8E+05	1.0E+03	3.4E+03	3.4E+04	3.4E+03
65.....	4.6E+03	7.6E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
70.....	5.4E+03	9.0E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
75.....	6.4E+03	1.1E+06	1.9E+03	6.4E+03	6.4E+04	6.4E+03
80.....	7.6E+03	1.3E+06	2.3E+03	7.6E+03	7.6E+04	7.6E+03
85.....	9.4E+03	1.5E+06	2.8E+03	9.4E+03	9.4E+04	9.4E+03
90.....	1.1E+04	1.8E+06	3.3E+03	1.1E+04	1.1E+05	1.1E+04
95.....	1.3E+04	2.2E+06	3.9E+03	1.3E+04	1.3E+05	1.3E+04
100.....	1.5E+04	2.6E+06	4.6E+03	1.5E+04	1.5E+05	1.5E+04
105.....	1.8E+04	3.0E+06	5.4E+03	1.8E+04	1.8E+05	1.8E+04
110.....	2.2E+04	3.6E+06	6.6E+03	2.2E+04	2.2E+05	2.2E+04
115.....	2.6E+04	4.4E+06	7.8E+03	2.6E+04	2.6E+05	2.6E+04
120.....	3.1E+04	5.0E+06	9.2E+03	3.1E+04	3.1E+05	3.1E+04

Table I-C.--- Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain

(Values for urban and rural areas)

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4.....	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
6.....	2.1E+01	3.5E+03	6.2E+00	2.1E+01	2.1E+02	2.1E+01
8.....	3.0E+01	5.0E+03	9.2E+00	3.0E+01	3.0E+02	3.0E+01
10.....	4.3E+01	7.6E+03	1.3E+01	4.3E+01	4.3E+02	4.3E+01
12.....	5.4E+01	9.0E+03	1.7E+01	5.4E+01	5.4E+02	5.4E+01
14.....	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
16.....	7.8E+01	1.3E+04	2.4E+01	7.8E+01	7.8E+02	7.8E+01
18.....	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
20.....	9.6E+01	1.6E+04	2.9E+01	9.6E+01	9.6E+02	9.6E+01
22.....	1.0E+02	1.8E+04	3.2E+01	1.0E+02	1.0E+03	1.0E+02
24.....	1.2E+02	1.9E+04	3.5E+01	1.2E+02	1.2E+03	1.2E+02
26.....	1.3E+02	2.2E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
28.....	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
30.....	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
35.....	2.0E+02	3.3E+04	5.8E+01	2.0E+02	2.0E+03	2.0E+02
40.....	2.4E+02	4.0E+04	7.2E+01	2.4E+02	2.4E+03	2.4E+02
45.....	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
50.....	3.6E+02	6.0E+04	1.1E+02	3.6E+02	3.6E+03	3.6E+02
55.....	4.6E+02	7.6E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
60.....	5.8E+02	9.4E+04	1.7E+02	5.8E+02	5.8E+03	5.8E+02
65.....	6.8E+02	1.1E+05	2.1E+02	6.8E+02	6.8E+03	6.8E+02
70.....	7.8E+02	1.3E+05	2.4E+02	7.8E+02	7.8E+03	7.8E+02
75.....	8.6E+02	1.4E+05	2.6E+02	8.6E+02	8.6E+03	8.6E+02
80.....	9.6E+02	1.6E+05	2.9E+02	9.6E+02	9.6E+03	9.6E+02
85.....	1.1E+03	1.8E+05	3.3E+02	1.1E+03	1.1E+04	1.1E+03
90.....	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
95.....	1.4E+03	2.3E+05	4.0E+02	1.4E+03	1.4E+04	1.4E+03
100.....	1.5E+03	2.6E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
105.....	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
110.....	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
115.....	2.1E+03	3.6E+05	6.4E+02	2.1E+03	2.1E+04	2.1E+03
120.....	2.4E+03	4.0E+05	7.2E+02	2.4E+03	2.4E+04	2.4E+03

Table I-D.--- Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Noncomplex Terrain

	(Values for use in urban areas)				(Values for use in rural areas)			
Terrain adjusted eff. stack ht. (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4.....	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
6.....	5.4E-01	1.3E+00	1.9E-01	9.4E-01	2.8E-01	6.6E-01	1.0E-01	5.0E-01
8.....	6.0E-01	1.4E+00	2.2E-01	1.1E+00	3.2E-01	7.6E-01	1.1E-01	5.6E-01
10.....	6.8E-01	1.6E+00	2.4E-01	1.2E+00	3.6E-01	8.6E-01	1.3E-01	6.4E-01
12.....	7.6E-01	1.8E+00	2.7E-01	1.4E+00	4.3E-01	1.1E+00	1.6E-01	7.8E-01
14.....	8.6E-01	2.1E+00	3.1E-01	1.5E+00	5.4E-01	1.3E+00	2.0E-01	9.6E-01
16.....	9.6E-01	2.3E+00	3.5E-01	1.7E+00	6.8E-01	1.6E+00	2.4E-01	1.2E+00
18.....	1.1E+00	2.6E+00	4.0E-01	2.0E+00	8.2E-01	2.0E+00	3.0E-01	1.5E+00
20.....	1.2E+00	3.0E+00	4.4E-01	2.2E+00	1.0E+00	2.5E+00	3.7E-01	1.9E+00
22.....	1.4E+00	3.4E+00	5.0E-01	2.5E+00	1.3E+00	3.2E+00	4.8E-01	2.4E+00
24.....	1.6E+00	3.9E+00	5.8E-01	2.8E+00	1.7E+00	4.0E+00	6.0E-01	3.0E+00
26.....	1.8E+00	4.3E+00	6.4E-01	3.2E+00	2.1E+00	5.0E+00	7.6E-01	3.9E+00
28.....	2.0E+00	4.8E+00	7.2E-01	3.6E+00	2.7E+00	6.4E+00	9.8E-01	5.0E+00
30.....	2.3E+00	5.4E+00	8.2E-01	4.0E+00	3.5E+00	1.3E+01	1.9E+00	9.6E+00
40.....	3.6E+00	9.0E+00	1.3E+00	6.8E+00	8.2E+00	2.0E+01	3.0E+00	1.5E+01
45.....	4.6E+00	1.1E+01	1.7E+00	8.6E+00	1.1E+01	2.8E+01	4.2E+00	2.1E+01
50.....	6.0E+00	1.4E+01	2.2E+00	1.1E+01	1.5E+01	3.7E+01	5.4E+00	2.8E+01
55.....	7.6E+00	1.8E+01	2.7E+00	1.4E+01	2.0E+01	5.0E+01	7.2E+00	3.6E+01
60.....	9.4E+00	2.2E+01	3.4E+00	1.7E+01	2.7E+01	6.4E+01	9.6E+00	4.8E+01
65.....	1.1E+01	2.8E+01	4.2E+00	2.1E+01	3.6E+01	8.6E+01	1.3E+01	6.4E+01
70.....	1.3E+01	3.1E+01	4.6E+00	2.4E+01	4.3E+01	1.0E+02	1.5E+01	7.6E+01
75.....	1.5E+01	3.6E+01	5.4E+00	2.7E+01	5.0E+01	1.2E+02	1.8E+01	9.0E+01
80.....	1.7E+01	4.0E+01	6.0E+00	3.0E+01	6.0E+01	1.4E+02	2.2E+01	1.1E+02
85.....	1.9E+01	4.6E+01	6.8E+00	3.4E+01	7.2E+01	1.7E+02	2.6E+01	1.3E+02
90.....	2.2E+01	5.0E+01	7.8E+00	3.9E+01	8.6E+01	2.0E+02	3.0E+01	1.5E+02
95.....	2.5E+01	5.8E+01	9.0E+00	4.4E+01	1.0E+02	2.4E+02	3.6E+01	1.8E+02
100.....	2.8E+01	6.8E+01	1.0E+01	5.0E+01	1.2E+02	2.9E+02	4.3E+01	2.2E+02
105.....	3.2E+01	7.6E+01	1.1E+01	5.6E+01	1.4E+02	3.4E+02	5.0E+01	2.6E+02
110.....	3.6E+01	8.6E+01	1.3E+01	6.4E+01	1.7E+02	4.0E+02	6.0E+01	3.0E+02
115.....	4.0E+01	9.6E+01	1.5E+01	7.2E+01	2.0E+02	5.8E+02	8.6E+01.	4.3E+02

Table I-E.-- Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain

(Values for use in urban and rural areas)

Terrain adjusted eff. stack ht. (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	1.1E-01	2.6E-01	4.0E-02	2.0E-01
6	1.6E-01	3.9E-01	5.8E-02	2.9E-01
8	2.4E-01	5.8E-01	8.6E-02	4.3E-01
10	3.5E-01	8.2E-01	1.3E-01	6.2E-01
12	4.3E-01	1.3E+00	1.9E-01	9.4E-01
16	6.0E-01	1.4E+00	2.2E-01	1.1E+00
18	6.8E-01	1.6E+00	2.4E-01	1.2E+00
20	7.6E-01	1.8E+00	2.7E-01	1.3E+00
22	8.2E-01	1.9E+00	3.0E-01	1.5E+00
24	9.0E-01	2.1E+00	3.3E-01	1.6E+00
26	1.0E+00	2.4E+00	3.6E-01	1.8E+00
28	1.1E+00	2.7E+00	4.0E-01	2.0E+00
30	1.2E+00	3.0E+00	4.4E-01	2.2E+00
35	1.5E+00	3.7E+00	5.4E-01	2.7E+00
40	1.9E+00	4.6E+00	6.8E-01	3.4E+00
45	2.4E+00	5.4E+00	8.4E-01	4.2E+00
50	2.9E+00	6.8E+00	1.0E+00	5.0E+00
55	3.5E+00	8.4E+00	1.3E+00	6.4E+00
60	4.3E+00	1.0E+01	1.5E+00	7.8E+00
65	5.4E+00	1.3E+01	1.9E+00	9.6E+00
70	6.0E+00	1.4E+01	2.2E+00	1.1E+01
75	6.8E+00	1.6E+01	2.4E+00	1.2E+01
80	7.6E+00	1.8E+01	2.7E+00	1.3E+01
85	8.2E+00	2.0E+01	3.0E+00	1.5E+01
90	9.4E+00	2.3E+01	3.4E+00	1.7E+01
95	1.0E+01	2.5E+01	4.0E+00	1.9E+01
100	1.2E+01	2.8E+01	4.3E+00	2.1E+01
105	1.3E+01	3.2E+01	4.8E+00	2.4E+01
110	1.5E+01	3.5E+01	5.4E+00	2.7E+01
115	1.7E+01	4.0E+01	6.0E+00	3.0E+01
120	1.9E+01	4.4E+01	6.4E+00	3.3E+01

Appendix II. to Part 266 -- Tier I Feed Rate Screening Limits for Total Chlorine

Terrain-adjusted effective stack height (m)	Noncomplex Terrain		Complex Terrain
	Urban (g/hr)	Rural (g/hr)	(g/hr)
4	8.2E+01	4.2E+01	1.9E+01
6	9.1E+01	4.8E+01	2.8E+01
8	1.0E+02	5.3E+01	4.1E+01
10	1.2E+02	6.2E+01	5.8E+01
12	1.3E+02	7.7E+01	7.2E+01
14	1.5E+02	9.1E+01	9.1E+01
16	1.7E+02	1.2E+02	1.1E+02
18	1.9E+02	1.4E+02	1.2E+02
20	2.1E+02	1.8E+02	1.3E+02
22	2.4E+02	2.3E+02	1.4E+02
24	2.7E+02	2.9E+02	1.6E+02
26	3.1E+02	3.7E+02	1.7E+02
28	3.5E+02	4.7E+02	1.9E+02
30	3.9E+02	5.8E+02	2.1E+02
35	5.3E+02	9.6E+02	2.6E+02
40	6.2E+02	1.4E+03	3.3E+02
45	8.2E+02	2.0E+03	4.0E+02
50	1.1E+03	2.6E+03	4.8E+02
55	1.3E+03	3.5E+03	6.2E+02
60	1.6E+03	4.6E+03	7.7E+02
65	2.0E+03	6.2E+03	9.1E+02
70	2.3E+03	7.2E+03	1.1E+03
75	2.5E+03	8.6E+03	1.2E+03
80	2.9E+03	1.0E+04	1.3E+03
85	3.3E+03	1.2E+04	1.4E+03
90	3.7E+03	1.4E+04	1.6E+03
95	4.2E+03	1.7E+04	1.8E+03
100	4.8E+03	2.1E+04	2.0E+03
105	5.3E+03	2.4E+04	2.3E+03
110	6.2E+03	2.9E+04	2.5E+03
115	7.2E+03	3.5E+04	2.8E+03
120	8.2E+03	4.1E+04	3.2E+03

Appendix III. to Part 266 -- Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride

Terrain-adjusted effective stack height (m)	Noncomplex terrain				Complex terrain	
	Values for urban areas		Values for rural areas		Values for use in urban and rural areas	
	Cl_2 (g/hr)	HCl (g/hr)	Cl_2 (g/hr)	HCl (g/hr)	Cl_2 (g/hr)	HCl (g/hr)
6	9.1E+01	1.6E+03	4.8E+01	8.3E+02	2.8E+01	4.9E+02
8	1.0E+02	1.8E+03	5.3E+01	9.2E+02	4.1E+01	7.1E+02
10	1.2E+02	2.0E+03	6.2E+01	1.1E+03	5.8E+01	1.0E+03
12	1.3E+02	2.3E+03	7.7E+01	1.3E+03	7.2E+01	1.3E+03
14	1.5E+02	2.6E+03	9.1E+01	1.6E+03	9.1E+01	1.6E+03
16	1.7E+02	2.9E+03	1.2E+02	2.0E+03	1.1E+02	1.8E+03
18	1.9E+02	3.3E+03	1.4E+02	2.5E+03	1.2E+02	2.0E+03
20	2.1E+02	3.7E+03	1.8E+02	3.1E+03	1.3E+02	2.3E+03
22	2.4E+02	4.2E+03	2.3E+02	3.9E+03	1.4E+02	2.4E+03
24	2.7E+02	4.8E+03	2.9E+02	5.0E+03	1.6E+02	2.8E+03
26	3.1E+02	5.4E+03	3.7E+02	6.5E+03	1.7E+02	3.0E+03
28	3.5E+02	6.0E+03	4.7E+02	8.1E+03	1.9E+02	3.4E+03
30	3.9E+02	6.9E+03	5.8E+02	1.0E+04	2.1E+02	3.7E+03
35	5.3E+02	9.2E+03	9.6E+02	1.7E+04	2.6E+02	4.6E+03
40	6.2E+02	1.1E+04	1.4E+03	2.5E+04	3.3E+02	5.7E+03
45	8.2E+02	1.4E+04	2.0E+03	3.5E+04	4.0E+02	7.0E+03
50	1.1E+03	1.8E+04	2.6E+03	4.6E+04	4.8E+02	8.4E+03
55	1.3E+03	2.3E+04	3.5E+03	6.1E+04	6.2E+02	1.1E+04
60	1.6E+03	2.9E+04	4.6E+03	8.1E+04	7.7E+02	1.3E+04
65	2.0E+03	3.4E+04	6.2E+03	1.1E+05	9.1E+02	1.6E+04
70	2.3E+03	3.9E+04	7.2E+03	1.3E+05	1.1E+03	1.8E+04
75	2.5E+03	4.5E+04	8.6E+03	1.5E+05	1.2E+03	2.0E+04
80	2.9E+03	5.0E+04	1.0E+04	1.8E+05	1.3E+03	2.3E+04
85	3.3E+03	5.8E+04	1.2E+04	2.2E+05	1.4E+03	2.5E+04
90	3.7E+03	6.6E+04	1.4E+04	2.5E+05	1.6E+03	2.9E+04
95	4.2E+03	7.4E+04	1.7E+04	3.0E+05	1.8E+03	3.2E+04
100	4.8E+03	8.4E+04	2.1E+04	3.6E+05	2.0E+03	3.5E+04
105	5.3E+03	9.2E+04	2.4E+04	4.3E+05	2.3E+03	3.9E+04
110	8.2E+03	1.1E+05	2.9E+04	5.1E+05	2.5E+03	4.5E+04
115	7.2E+03	1.3E+05	3.5E+04	6.1E+05	2.8E+03	5.0E+04
120	8.2E+03	1.4E+05	4.1E+04	7.2E+05	3.2E+03	5.6E+04

Appendix IV To Part 266 -- Reference Air Concentrations*

Constituent	CAS No.	RAC (ug/m3
Acetaldehyde	75-07-0	10
Acetonitrile	75-05-8	10
Acetophenone	98-86-2	100
Acrolein	107-02-8	20
Aldicarb	116-06-3	1
Aluminum phosphide	20859-73-8	0.3
Allyl alcohol	107-18-6	5
Antimony	7440-36-0	0.3
Barium	7440-39-3	50
Barium cyanide	542-62-1	50
Bromomethane	74-83-9	0.8
Calcium Cyanide	592-01-8	30
Carbon Disulfide	75-15-0	200
Chloral	75-87-6	2
Chlorine (free)		0.4
2-Chloro-1,3-butadiene	126-99-8	3
Chromium III	16065-83-1	1000
Copper Cyanide	544-92-3	5
Cresols	1319-77-3	50
Cumene	98-82-8	1
Cyanide (free)	57-12-15	20
Cyanogen	460-19-5	30
Cyanogen Bromide	506-68-3	80
Di-n-butyl Phthalate	84-74-2	100
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Dichlorodifluoromethane	75-71-8	200
2,4-Dichlorophenol	120-83-2	3
Diethyl Phthalate	84-66-2	800
Dimethoate	60-51-5	0.8
2,4-Dinitrophenol	51-28-5	2
Dinoseb	88-85-7	0.9
Diphenylamine	122-39-4	20
Endosulfan	115-29-1	0.05
Endrin	72-20-8	0.3
Fluorine	7782-41-4	50
Formic Acid	64-18-6	2000
Glycidylaldehyde	765-34-4	0.3
Hexachlorocyclopentadiene	77-47-4	5
Hexachlorophene	70-30-4	0.3
Hydrocyanic Acid	74-90-8	20
Hydrogen Chloride	7647-01-1	7
Hydrogen Sulfide	7783-06-4	3
Isobutyl Alcohol	78-83-1	300
Lead	7439-92-1	0.09
Maleic Anhydride	108-31-6	100
Mercury	7439-97-6	0.3
Methacrylonitrile	126-98-7	0.1
Methomyl	16752-77-5	20
Methoxychlor	72-43-5	50
Methyl Chlorocarbonate	79-22-1	1000
Methyl Ethyl Ketone	78-93-3	80

Appendix IV To Part 266 -- Reference Air Concentrations*

Constituent	CAS No.	RAC (ug/m3
Methyl Parathion	298-00-0	0.3
Nickel Cyanide	557-19-7	20
Nitric Oxide	10102-43-9	100
Nitrobenzene	98-95-3	0.8
Pentachlorobenzene	608-93-5	0.8
Pentachlorophenol	87-86-5	30
Phenol	108-95-3	30
M-Phenylenediamine	108-45-2	5
Phenylmercuric Acetate	62-38-4	0.075
Phosphine	7803-51-2	0.3
Phthalic Anhydride	85-44-9	2000
Potassium Cyanide	151-50-8	50
Potassium Silver Cyanide	506-61-6	200
Pyridine	110-86-1	1
Selenious Acid	7783-60-8	3
Selenourea	630-10-4	5
Silver	7440-22-4	3
Silver Cyanide	506-64-9	100
Sodium Cyanide	143-33-9	30
Strychnine	57-24-9	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	0.3
2,3,4,6-Tetrachlorophenol	58-90-2	30
Tetraethyl lead	78-00-2	0.0001
Tetrahydrofuran	109-99-9	10
Thallic oxide	1314-32-5	0.3
Thallium	7440-28-0	0.5
Thallium (I) Acetate	563-68-8	0.5
Thallium (I) Carbonate	6533-73-9	0.3
Thallium (I) Chloride	7791-12-0	0.3
Thallium (I) Nitrate	10102-45-1	0.5
Thallium Selenite	12039-52-0	0.5
Thallium (I) Sulfate	7446-18-6	0.075
Thiram	137-26-8	5
Toluene	108-88-3	300
1,2,4-Trichlorobenzene	120-82-1	20
Trichloromonofluoromethane	75-69-4	300
2,4,5-Trichlorophenol	95-95-4	100
Vanadium Pentoxide	1314-62-1	20
Warfarin	81-81-2	0.3
Xylenes	1330-20-7	80
Zinc Cyanide	557-21-1	50
Zinc phosphide	1314-84-7	0.3

*The RAC for other Appendix VIII Part 261 constituents not listed herein or in Appendix V of this Part is 0.1 ug/m^3.

Appendix V. To Part 266 -- Risk Specific Doses (10^{-5})

Constituent	CAS No.	Unit risk (m^3/ug)	RsD (ug/m^3)
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz[a]anthracene	56-55-3	8.9E-04	1.1E+02
Benzene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo[a]pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl)ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)-phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E-00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz[a,h]anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloropropane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Dieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstibestrol	56-53-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E-00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03
Hexachlorobenzene	118-74-1	4.9E-04	2.0E-02
Hexachlorobutadiene	87-68-3	2.0E-05	5.0E-01
Alpha-hexachloro-cyclohexane	319-84-6	1.8E-03	5.6E-03
Beta-hexachlorocyclohexane	319-85-7	5.3E-04	1.9E-02
Gamma-hexachloro-cyclohexane	58-89-9	3.8E-04	2.6E-02
Hexachlorocyclohexane, Technical	.....	5.1E-04	2.0E-02
Hexachlorodibenzo-p-dioxin (1,2 Mixture)	.....	1.3E+0	7.7E-06
Hexachloroethane	67-72-1	4.0E-06	2.5E+00

Appendix V. To Part 266 -- Risk Specific Doses (10^{-5})(Continued)

Constituent	CAS No.	Unit risk (m3/ug)	RsD (ug/m3)
Hydrazine.....	302-01-2	2.9E-03	3.4E-03
Hydrazine Sulfate.....	302-01-2	2.9E-03	3.4E-03
3-Methylcholanthrene.....	56-49-5	2.7E-03	3.7E-03
Methyl Hydrazine.....	60-34-4	3.1E-04	3.2E-02
Methylene Chloride.....	75-09-2	4.1E-06	2.4E+00
4,4'-Methylene-bis-2-chloroaniline-	101-14-4	4.7E-05	2.1E-01
Nickel.....	7440-02-0	2.4E-04	4.2E-02
Nickel Refinery Dust.....	7440-02-0	2.4E-04	4.2E-02
Nickel Subsulfide.....	12035-72-2	4.8E-04	2.1E-02
2-Nitropropane.....	79-46-9	2.7E-02	3.7E-04
N-Nitroso-n-butylamine.....	924-16-3	1.6E-03	6.3E-03
N-Nitroso-n-methylurea.....	684-93-5	8.6E-02	1.2E-04
N-Nitrosodiethylamine.....	55-18-5	4.3E-02	2.3E-04
N-Nitrosopyrrolidine.....	930-55-2	6.1E-04	1.6E-02
Pentachloronitrobenzene	82-68-8	7.3E-05	1.4E-01
PCBs.....	1336-36-3	1.2E-03	8.3E-03
Pronamide.....	23950-58-5	4.6E-06	2.2E+00
Reserpine.....	50-55-5	3.0E-03	3.3E-03
2,3,7,8-Tetrachloro-dibenzo-p-dioxin.....	1746-01-6	4.5E+01	2.2E-07
1,1,2,2-Tetrachloroethane.....	79-34-5	5.8E-05	1.7E-01
Tetrachloroethylene.....	127-18-4	4.8E-07	2.1E+01
Thiourea.....	2-56-6	5.5E-04	1.8E-02
1,1,2-Trichloroethane.....	79-00-5	1.6E-05	6.3E-01
Trichloroethylene.....	9-01-6	1.3E-06	7.7E+00
2,4,6-Trichlorophenol.....	88-06-2	5.7E-06	1.8E+00
Toxaphene.....	8001-35-2	3.2E-04	3.1E-02
Vinyl Chloride.....	75-01-4	7.1E-06	1.4E+00

Appendix VI. To Part 266 -- Stack Plume Rise
[Estimated Plume Rise (in Meters) Based on Stack Exit Flow Rate and Gas Temperature]

	Exhaust Temperature (K°)										
Flow rate (m^3/s)	< 325	325-349	350-399	400-449	450-499	500-599	600-699	700-799	800-999	1000-1499	>1499
< 0.5	0	0	0	0	0	0	0	0	0	0	0
0.5-0.9	0	0	0	0	0	0	0	0	1	1	1
1.0-1.9	0	0	0	0	1	1	2	3	3	3	4
2.0-2.9	0	0	1	3	4	4	6	6	7	8	9
3.0-3.9	0	1	2	5	6	7	9	10	11	12	13
4.0-4.9	1	2	4	6	8	10	12	13	14	15	17
5.0-7.4	2	3	5	8	10	12	14	16	17	19	21
7.5-9.9	3	5	8	12	15	17	20	22	22	23	24
10.0-12.4	4	6	10	15	19	21	23	24	25	26	27
12.5-14.9	4	7	12	18	22	23	25	26	27	28	29
15.0-19.9	5	8	13	20	23	24	26	27	28	29	31
20.0-24.9	6	10	17	23	25	27	29	30	31	32	34
25.0-29.9	7	12	20	25	27	29	31	32	33	35	36
30.0-34.9	8	14	22	26	29	31	33	35	36	37	39
35.0-39.9	9	16	23	28	30	32	35	36	37	39	41
40.0-49.9	10	17	24	29	32	34	36	38	39	41	42
50.0-59.9	12	21	26	31	34	36	39	41	42	44	46
60.0-69.9	14	22	27	33	36	39	42	43	45	47	49
70.0-79.9	16	23	29	35	38	41	44	46	47	49	51
80.0-89.9	17	25	30	36	40	42	46	48	49	51	54
90.0-99.9	19	26	31	38	42	44	48	50	51	53	56
100.0-119.9	21	26	32	39	43	46	49	52	53	55	58
120.0-139.9	22	28	35	42	46	49	52	55	56	59	61
140.0-159.9	23	30	36	44	48	51	55	58	59	62	65
160.0-179.9	25	31	38	46	50	54	58	60	62	65	67
180.0-199.9	26	32	40	48	52	56	60	63	65	67	70
>199.9	26	33	41	49	54	58	62	65	67	69	73

Appendix VII To Part 266.--Health-Based Limits for Exclusion of Waste Derived Residues*

Metals--TCLP Extract Concentration Limits

Constituent	CAS No.	Concentration Limits (mg/l)
Antimony.....	7440-36-0	1xE+00
Arsenic	7440-38-2	5xE+00
Barium	7440-39-3	1xE+02
Beryllium	7440-41-7	7xE-03
Cadmium.....	7440-43-9	1xE+00
Chromium	7440-47-3	5xE+00
Lead	7439-92-1	5xE+00
Mercury	7439-97-6	2xE-01
Nickel	7440-02-0	7xE+01
Selenium.....	7782-49-2	1xE+00
Silver.....	7440-22-4	5xE+00
Thallium.....	7440-28-0	7xE+00

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Acetonitrile.....	75-05-8	2xE-01
Acetophenone.....	98-86-2	4xE+00
Acrolein.....	107-02-8	5xE-01
Acrylamide.....	79-06-1 .	2xE-04
Acrylonitrile.....	107-13-1	7xE-04
Aldrin.....	309-00-2	2xE-05
Allyl alcohol.....	107-18-6	2xE-01
Aluminum phosphide.....	20859-73-8	1xE-02
Aniline.....	62-53-3	6xE-02
Barium cyanide.....	542-62-1	1xE+00
Benz(a)anthracene.....	56-55-3	1xE-04
Benzene.....	71-43-2	5xE-03
Benzidine.....	92-87-5	1xE-06
Bis(2-chloroethyl) ether.....	111-44-4	3xE-04
Bis(chloromethyl) ether.....	542-88-1	2xE-06
Bis(2-ethylhexyl) phthalate.....	117-81-7	3xE+01
Bromoform.....	75-25-2	7xE-01
Calcium cyanide.....	592-01-8	1xE-06
Carbon disulfide.....	75-15-0	4xE+00
Carbon tetrachloride.....	56-23-5	5xE-03
Chlordane.....	57-74-9	3xE-04
Chlorobenzene.....	108-90-7	1xE+00
Chloroform.....	67-66-3	6xE-02
Copper cyanide.....	544-92-3	2xE-01
Cresols (Cresylic acid).....	1319-77-3	2xE+00

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Cyanogen	460-19-5	1xE+00
DDT.....	50-29-3	1xE-03
Dibenz[a,h]anthracene.....	53-70-3	7xE-06
1,2-Dibromo-3-chloropropane..	96-12-8	2xE-05
p-Dichlorobenzene.....	106-46-7	7.5xE-02
Dichlorodifluoromethane.....	75-71-8	7xE+00
1,1-Dichloroethylene.....	75-35-4	5xE-03
2,4-Dichlorophenol.....	120-83-2	1xE-01
1,3-Dichloropropene.....	542-75-6	1xE-03
Dieldrin.....	60-57-1	2xE-05
Diethyl Phthalate.....	84-66-2	3xE+01
Diethylstilbesterol.....	56-53-1	7xE-07
Dimethoate.....	60-51-5	3xE-02
2,4-Dinitrotoluene.....	121-14-2	5xE-04
Diphenylamine.....	22-39-4	9xE-01
1,2-Diphenylhydrazine.....	122-66-7	5xE-04
Endosulfan.....	115-29-7	2xE-03
Endrin.....	72-20-8	2xE-04
Epichlorohydrin.....	106-89-8	4xE-02
Ethylene dibromide.....	106-93-4	4xE-07
Ethylene oxide.....	75-21-8	3xE-04
Fluorine.....	7782-41-4	4xE+00
Formic Acid.....	64-18-6	7xE+01
Heptachlor.....	76-44-8	8xE-05
Heptachlor epoxide.....	1024-57-3	4xE-05
Hexachlorobenzene.....	118-74-1	2xE-04
Hexachlorobutadiene.....	87-68-3	5xE-03
Hexachlorocyclopentadiene.....	77-47-4	2xE-01
Hexachlorodibenzo-p-dioxins....	19408-74-3	6xE-08
Hexachloroethane.....	67-72-1	3xE-02
Hydrazine.....	302-01-1	1xE-04
Hydrogen cyanide.....	74-90-8	7xE-05
Hydrogen sulfide.....	7783-06-4	1xE-06
Isobutyl alcohol.....	78-83-1	1xE+01
Methomyl.....	16752-77-5	1xE+00
Methoxychlor.....	72-43-5	1xE-01
3-Methylcholanthrene.....	56-49-5	4xE-05
4,4'- Methylenebis(2-chloroaniline).....	101-14-4	2xE-03
Methylene chloride.....	75-09-2	5xE-02
Methyl ethyl ketone (MEK).....	78-93-3	2xE+00
Methyl hydrazine.....	60-34-4	3xE-04
Methyl parathion.....	298-00-0	2xE-02
Naphthalene.....	91-20-3	1xE+01
Nickel cyanide.....	557-19-7	7xE-01
Nitric oxide.....	10102-43-9	4xE+00
Nitrobenzene.....	8-95-3	2xE-02
N-Nitrosodi-n-butylamine.....	924-16-3	6xE-05
N-Nitrosodiethylamine.....	55-18-5	2xE-06
N-Nitroso-N-methylurea.....	684-93-5	1xE-07
N-Nitrosopyrrolidine.....	930-55-2	2xE-04

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Pentachlorobenzene.....	608-93-5	3xE-02
Pentachloronitrobenzene (PCNB)	82-68-8	1xE-01
Pentachlorophenol.....	87-86-5	1xE+00
Phenol.....	108-95-2	1xE+00
Phenylmercury acetate.....	62-38-4	3xE-03
Phosphine.....	7803-51-2	1xE-02
Polychlorinated biphenyls, N.O.S.	1336-36-3	5xE-05
Potassium cyanide.....	151-50-8	2xE+00
Potassium silver cyanide.....	506-61-6	7xE+00
Pronamide.....	23950-58-5	3xE+00
Pyridine.....	110-86-1	4xE-02
Reserpine.....	50-55-5	3xE-05
Selenourea.....	630-10-4	2xE-01
Silver cyanide.....	506-64-9	4xE+00
Sodium cyanide.....	143-33-9	1xE+00
Strychnine.....	57-24-9	1xE-02
1,2,4,5-Tetrachlorobenzene.....	95-94-3	1xE-02
1,1,2,2- tetrachloroethane.....	79-34-5	2xE-03
Tetrachloroethylene.....	127-18-4	7xE-01
2,3,4,6-Tetrachlorophenol.....	58-90-2	1xE-02
Tetraethyl lead.....	78-00-2	4xE-06
Thiourea.....	62-56-6	2xE-04
Toluene.....	108-88-3	1xE+01
Toxaphene.....	8001-35-2	5xE-03
1,1,2-Trichloroethane.....	79-00-5	6xE-03
Trichloroethylene.....	79-01-6	5xE-03
Trichloromonofluoromethane....	75-69-4	1xE+01
2,4,5-Trichlorophenol.....	95-95-4	4xE+00
2,4,6-Trichlorophenol.....	88-06-2	4xE+00
Vanadium pentoxide.....	1314-62-1	7xE-01
Vinyl chloride.....	75-01-4	2xE-03

*Note 1: The health-based concentration limits for Appendix VIII Part 261 constituents for which a health-based concentration is not provided below is 2xE-06 mg/kg.

Note 2: The levels specified in this appendix and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of this appendix are administratively stayed under the condition, for those constituents specified in §266.112(b)(1), that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in §268.43 of this chapter for F039 nonwastewaters. See §266.112(b)(2)(i).

Appendix VIII.—to Part 266.—Organic Compounds for Which Residues Must Be Analyzed

Volatiles	Semivolatiles
Benzene	Bis(2-ethylhexyl)phthalate
Toluene	Naphthalene
Carbon tetrachloride	Phenol
Chloroform	Diethyl phthalate
Methylene chloride	Butyl benzyl phthalate
Trichloroethylene	2,4-Dimethylphenol
Tetrachloroethylene	o-Dichlorobenzene
1,1,1-Trichloroethane	m-Dichlorobenzene
Chlorobenzene	p-Dichlorobenzene
cis-1,4-Dichloro-2-butene	Hexachlorobenzene
Bromochloromethane	2,4,6-Trichlorophenol
Bromodichloromethane	Fluoranthene
Bromoform	o-Nitrophenol
Bromomethane	1,2,4-Trichlorobenzene
Methylene bromide	o-Chlorophenol
Methyl ethyl ketone	Pentachlorophenol
	Pyrene
	Dimethyl phthalate
	Mononitrobenzene
	2,6-Toluene diisocyanate
	Polychlorinated dibenzo-p-dioxins[1]
	Polychlorinated dibenzo-furans[1]

[1] Analyses for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans are required only for residues collected from areas downstream of the combustion chamber (e.g., ductwork, boiler tubes, heat exchange surfaces, air pollution control devices, etc.).

Note to the Table: Analysis is not required for those compounds that do not have an established F039 nonwastewater concentration limit.

Editorial Note:
Appendix IX which is incorporated by reference, is the Methods Manual for Compliance with BIF Regulations, U.S. EPA, December 1990; copies are available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600, document number PB91-120-006.

Appendix X to Part 266 [Reserved]

Appendix XI To Part 266 - Lead-Bearing Materials That May be Processed in Exempt Lead Smelters

A. Exempt Lead-Bearing Materials When Generated or Originally Produced By Lead-Associated Industries[1]

Acid dump/fill solids
Sump mud
Materials from laboratory analyses
Acid filters
Baghouse bags
Clothing (e.g., coveralls, aprons, shoes, hats, gloves)
Sweepings
Air filter bags and cartridges
Respiratory cartridge filters
Shop abrasives
Stacking boards
Waste shipping containers (e.g., cartons, bags, drums, cardboard)

Paper hand towels
Wiping rags and sponges
Contaminated pallets
Water treatment sludges, filter cakes, residues, and solids
Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries (e.g., K069 and D008 wastes)
Spent grids, posts, and separators
Spent batteries
Lead oxide and lead oxide residues
Lead plates and groups
Spent battery cases, covers, and vents
Pasting belts
Water filter media
Cheesecloth from pasting rollers
Pasting additive bags
Asphalt paving materials

B. Exempt Lead-Bearing Materials When Generated or Originally Produced By Any Industry.

Charging jumpers and clips
Platen abrasive
Fluff from lead wire and cable casings
Lead-based pigments and compounding pigment dust

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[1]Lead-associates industries are lead smelters, lead-acid battery manufacturing, and lead chemical manufacturing (e.g., manufacturing of lead oxide or other lead compounds).

Appendix XII To Part 266 -- Nickel or Chromium-Bearing Materials that may be Processed in Exempt Nickel-Chromium Recovery Furnaces

A. Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron

Baghouse bags
Raney nickel catalyst
Floor sweepings
Air filters
Electroplating bath filters
Wastewater filter media
Wood pallets
Disposable clothing (coveralls, aprons, hats, and gloves)
Laboratory samples and spent chemicals
Shipping containers and plastic liners from containers or vehicles used to transport nickel or chromium-containing wastes
Respirator cartridge filters
Paper hand towels

B. Exempt Nickel or Chromium-Bearing Materials when Generated by Any Industry

Electroplating wastewater treatment sludges (F006)
Nickel and/or chromium-containing solutions
Nickel, chromium, and iron catalysts
Nickel-cadmium and nickel-iron batteries
Filter cake from wet scrubber system water treatment plants in the specialty steel industry[1]
Filter cake from nickel-chromium alloy pickling operations[1]

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[1]If a hazardous waste under an authorized State program.

Appendix XIII to Part 266 -- Mercury Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

These are exempt mercury-bearing materials with less than 500 ppm of 40 CFR Part 261, appendix VIII organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon
2. Decomposer graphite
3. Wood
4. Paper
5. Protective clothing
6. Sweepings
7. Respiratory cartridge filters
8. Cleanup articles
9. Plastic bags and other contaminated containers
10. Laboratory and process control samples
11. K106 and other wastewater treatment plant sludge and filter cake
12. Mercury cell sump and tank sludge
13. Mercury cell process solids
14. Recoverable levels of mercury contained in soil

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