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### CHAPTER 4 - STATE PERFORMANCE STANDARDS FOR SPECIFIC EXISTING SOURCES

#### WYOMING AIR QUALITY STANDARDS AND REGULATIONS

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Section 1. Introduction to state performance standards for specific existing sources.

(a) This chapter establishes state performance standards for specific existing sources. Most of the sections under this chapter were required by the Environmental Protection Agency under section 111(d) of the Clean Air Act. Each of the standards listed has an accompanying New Source Performance Standard (NSPS) under Chapter 5, Section 2 which applies to new sources.

Section 2. Existing sulfuric acid production units.

(a) **Sulfuric acid mist.** Any existing facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides, mercaptans, or acid sludge shall limit the atmospheric discharge of acid mist in the effluent to not more than 0.50 pounds per ton of acid produced (0.25 kgm per metric ton)--maximum 2-hour average, expressed as H<sub>2</sub>SO<sub>4</sub>. Reference method: Method 8, Appendix A, 40 CFR part 60 or an equivalent method.

(b) **Sulfur dioxide.** Any existing facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides, mercaptans, or acid sludge shall limit the atmospheric discharge of sulfur dioxide in the effluent to not more than 2,000 ppm--maximum 2-hour average.

Section 3. Existing nitric acid manufacturing plants.

(a) The emission of nitrogen oxides from existing nitric acid manufacturing plants, calculated as nitrogen dioxide shall be limited to 5.5 pounds per ton (2.8 kilograms per metric ton) of acid produced, maximum 2-hour average.

Section 4. Existing municipal solid waste landfills.

*(a) Definitions.* For purposes of this section:

*(i) The term "Municipal Solid Waste Landfill"* shall mean the entire disposal facility in a contiguous geographical space where household waste, commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, or industrial solid waste is placed in or on land. Portions of the municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new landfill, an existing landfill, or a lateral expansion.

*(ii) The term "Existing Municipal Solid Waste Landfill"* shall mean a municipal solid waste landfill that commenced construction, reconstruction or modification before May 30, 1991. An existing municipal solid waste landfill may be active or closed. Physical or operational changes made to an existing municipal solid waste landfill solely to comply with the emission limits are not considered a modification or reconstruction.

*(b) Chapter 6, Section 3 applicability:*

*(i)* For purposes of obtaining an operating permit under Section 30, the owner or operator of a MSW landfill subject to this Section with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under Chapter 6, Section 3. For purposes of submitting a timely application for an operating permit under Chapter 6, Section 3, the owner or operator of a MSW landfill subject to this Section with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters on July 31, 1998 and not otherwise subject to Chapter 6, Section 3, becomes subject to the requirements of Chapter 6, Section 3(c)(i)(A) on October 29, 1998.

*(ii)* When a MSW landfill subject to this Section is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under Chapter 6, Section 3 for the landfill if the landfill is not otherwise subject to the requirements of Chapter 6, Section 3 and if either of the following conditions are met:

(A) The landfill was never subject to the requirement for a control system under Chapter 4, Section 4(d); or

(B) The owner or operator meets the conditions for control system removal specified in Chapter 5, Section 2(b), subpart WWW §60.752.

(c) The owner or operator of an existing municipal solid waste landfill that meets the following conditions (i - iii) shall comply with (d) through (j) of this section.

(i) The landfill has accepted waste at any time since November 8, 1987 or has additional design capacity available for future waste deposition;

(ii) The landfill has a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters (3.27 million cubic yards);

(iii) The landfill has a nonmethane organic compound emission rate of 50 megagrams per year (55 tons per year) or more. The calculation of the landfill nonmethane organic compound emission rate shall follow the test methods and procedures in Chapter 5, Section 2(b), subpart WWW §60.754, to determine the landfill nonmethane organic compound emission rate.

(iv) The owner or operator of each existing municipal solid waste landfill meeting the condition in subsection (i) shall submit a design capacity report within 90 days of the effective date of this regulation. If the design capacity of the landfill meets the condition in subsection (ii), then the owner or operator shall also submit an initial non-methane organic compound emission rate report in accordance with the procedures in Chapter 5, Section 2(b), subpart WWW §60.754, within 90 days of the effective date of this regulation and annually or every five years thereafter in accordance with Chapter 5, Section 2(b), subpart WWW §60.757(b). If the facility meets the conditions of subsections (i)-(iii), then the facility is considered to be an affected facility for purposes of this regulation.

(d) The owner or operator of an existing municipal solid waste landfill that is defined an affected facility under (c) of this section shall install a collection and control system that meets the conditions provided in Chapter 5, Section 2(b), subpart WWW §60.752(b)(2)(ii). The control system must meet one of the following requirements:

(i) An open flare designed and operated in accordance with the parameters established in Chapter 5, Section 2(m);

(ii) A control system designed and operated to reduce nonmethane organic compounds by 98 weight percent; or

(iii) An enclosed combustor designed and operated to either reduce nonmethane organic compounds by 98 weight percent or the outlet nonmethane organic compound concentration to 20 parts per million as hexane by volume, dry basis at three percent oxygen or less.

(e) The owner or operator of an existing municipal solid waste landfill that is defined as an affected facility under (c) of this section shall submit plans and specifications for the collection and control system for review and approval by the Division. The collection and control system design plan shall be prepared by a professional engineer. The Division shall review and approve or disapprove the design plan within 60 days from date of receipt.

(f) Compliance schedules: The owner or operator of an existing solid waste municipal landfill that is defined as an affected facility under (c) of this section shall comply with the control requirements on the following schedule:

(i) If the landfill's non-methane organic carbon emission rate is equal to or greater than 50 megagrams/yr, then the owner or operator shall submit a final control plan to the Division for review and approval no later than one year from the date of submission of the first annual emission rate report. The final control plan shall include:

(A) A date for the award of contracts for a gas collection and control system, no later than 20 months after the effective date of this regulation;

(B) A date for initiating on-site construction or installation of the collection and control systems, no later than 24 months after the effective date of this regulation;

(C) A date for completing on-site construction or installation of collection and control systems, no later than 30 months after the date the initial NMOC emission rate report shows NMOC emissions equal or exceed 50 megagrams per year; and

(D) A date demonstrating compliance, no later than 180 days after the installation of the collection and control system.

(ii) The owner and operator of each existing municipal solid waste landfill meeting the conditions of Chapter 4, Section 4(c)(i) & (ii) whose nonmethane organic compound emission rate is less than 50 megagrams per year on the effective date of this regulation shall submit a final control plan to the Division within one year after its nonmethane organic compound emissions exceed 50 megagrams per year. The final control plan shall include:

(A) A date for the award of contracts for a gas collection and control system, no later than 20 months after the landfill becomes an affected facility under Chapter 4, Section 4(c)(iv);

(B) A date for initiating on-site construction or installation of the collection and control systems, no later than 24 months after the landfill becomes an affected facility under Chapter 4, Section 4(c)(iv);

(C) A date for completing on-site construction or installation of collection and control systems, no later than 30 months after the landfill becomes an affected facility under Chapter 4, Section 4(c)(iv); and

(D) A date for demonstrating compliance, no later than 180 days after the installation of the collection and control system.

*(iii)* Upon submission and review of the final control plan by the Division, the compliance schedule described in Chapter 4, Section 4(f)(i) or (ii) shall be incorporated into a Department Order.

*(g)* The owner or operator of an existing municipal solid waste landfill that is defined as an affected facility under (c) of this section, shall meet the operational standards for collection and control systems in Chapter 5, Section 2(b), subpart WWW §60.753.

*(h)* The owner or operator of an existing municipal solid waste landfill that is defined as an affected facility under (c) of this section, shall meet the compliance provisions in Chapter 5, Section 2(b) subpart WWW §60.755.

*(i)* The owner or operator of an existing municipal solid waste landfill that is defined as an affected facility under (c) of this section, shall meet the monitoring provisions in Chapter 5, Section 2(b), subpart WWW §60.756.

*(j)* The owner or operator of an existing municipal solid waste landfill that is defined as an affected facility under (c) of this section, shall meet the reporting provisions in Chapter 5, Section 2(b), subpart WWW §60.757, and the recordkeeping provisions in Chapter 5, Section 2(b), subpart WWW §60.758.

Section 5. Existing hospital/medical/infectious waste incinerators.

**Scope:**

This section contains emission limits and compliance times for the control of certain designated pollutants from existing hospital/medical/infectious waste incinerator(s) (HMIWI) in accordance with sections 111(d) and 129 of the Clean Air Act.

**(a) Definitions:**

**"Batch HMIWI"** means an HMIWI that is designed such that neither waste charging nor ash removal can occur during combustion.

**"Biologicals"** means preparations made from living organisms and their products, including vaccines, cultures, etc., intended for use in diagnosing, immunizing, or treating humans or animals or in research pertaining thereto.

**"Blood Products"** means any product derived from human blood, including but not limited to blood plasma, platelets, red or white blood corpuscles, and other derived licensed products, such as interferon, etc.

**"Body Fluids"** means liquid emanating or derived from humans and limited to blood; dialysate; amniotic, cerebrospinal, synovial, pleural, peritoneal and pericardial fluids; and semen and vaginal secretions.

**"Bypass stack"** means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

**"Chemotherapeutic waste"** means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

**"Co-fired combustor"** means a unit combusting hospital waste and/or medical/infectious waste with other fuels or wastes (e.g., coal, municipal solid waste) and subject to an enforceable requirement limiting the unit to combusting a fuel feed stream, 10 percent or less of the weight of which is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar quarter basis. For purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered "other" wastes when calculating the percentage of hospital waste and medical/infectious waste combusted.

**"Continuous emission monitoring system or CEMS"** means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.

**"Continuous HMIWI"** means an HMIWI that is designed to allow waste charging and ash removal during combustion.

**"Dioxins/furans"** means the combined emissions of tetra-through octa-chlorinated dibenzo-para-dioxins and dibenzofurans, as measured by EPA Reference Method 23.

**"Dry scrubber"** means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gases in the HMIWI exhaust stream forming a dry powder material.

**"Fabric filter or baghouse"** means an add-on air pollution control system that removes particulate matter (PM) and nonvaporous metals emissions by passing flue gas through filter bags.

**"High-air phase"** means the stage of the batch operating cycle when the primary chamber reaches and maintains maximum operating temperatures.

**"Hospital"** means any facility which has an organized medical staff, maintains at least six inpatient beds, and where the primary function of the institution is to provide diagnostic and therapeutic patient services and continuous nursing care primarily to human inpatients who are not related and who stay on average in excess of 24 hours per admission. This definition does not include facilities maintained for the sole purpose of providing nursing or convalescent care to human patients who generally are not acutely ill but who require continuing medical supervision.

**"Hospital/medical/infectious waste incinerator or HMIWI or HMIWI unit"** means any device that combusts any amount of hospital waste and/or medical/infectious waste.

**"Hospital/medical/infectious waste incinerator operator or HMIWI operator"** means any person who operates, controls or supervises the day-to-day operation of an HMIWI.

**"Hospital waste"** means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.

**"Infectious agent"** means any organism (such as a virus or bacteria) that is capable of being communicated by invasion and multiplication in body tissues and capable of causing disease or adverse health impacts in humans.

**"Intermittent HMIWI"** means an HMIWI that is designed to allow waste charging, but not ash removal, during combustion.

**"Large HMIWI"** means:

(i) Except as provided in (ii);

(A) An HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour; or

(B) A continuous or intermittent HMIWI whose maximum charge rate is more than 500 pounds per hour; or

(C) A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day.

(ii) The following are not large HMIWI:

(A) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 500 pounds per hour; or

(B) A batch HMIWI whose maximum charge rate is less than or equal to 4,000 pounds per day.

**"Low-level radioactive waste"** means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

**"Malfunction"** means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions. During periods of malfunction the operator shall operate within established parameters as much as possible, and monitoring of all applicable operating parameters shall continue until all waste has been combusted or until the malfunction ceases, whichever comes first.

**"Maximum charge rate"** means:

(i) For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(ii) For batch HMIWI, 110 percent of the lowest daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

**"Maximum design waste burning capacity"** means:

(i) For intermittent and continuous HMIWI,

$$C = P_v \times 15,000/8,500$$

Where:

C	=	HMIWI capacity, lb/hr
P <sub>v</sub>	=	primary chamber volume, ft <sup>3</sup>
15,000	=	primary chamber heat release rate factor, Btu/ft <sup>3</sup> /hr
8,500	=	standard waste heating value, Btu/lb;

(ii) For batch HMIWI,

$$C = P_v \times 4.5/8$$

Where:

C	=	HMIWI capacity, lb/hr
P <sub>v</sub>	=	primary chamber volume, ft <sup>3</sup>
4.5	=	waste density, lb/ft <sup>3</sup>
8	=	typical hours of operation of a batch HMIWI, hours.

**"Maximum fabric filter inlet temperature"** means 110 percent of the lowest 3-hour average temperature at the inlet to the fabric filter (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.

**"Maximum flue gas temperature"** means 110 percent of the lowest 3-hour average temperature at the outlet from the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the mercury (Hg) emission limit.

**"Medical/infectious waste"** means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals that is listed in paragraphs (i) through (vii) of

this definition. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in 40 CFR part 261 (RCRA, Hazardous Waste); household waste, as defined in 40 CFR part 261 Sec. 261.4(b)(1); ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in Sec. 261.4(a)(1) of 40 CFR part 261.

(i) Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

(ii) Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.

(iii) Human blood and blood products including:

(A) Liquid waste human blood;

(B) Products of blood;

(C) Items saturated and/or dripping with human blood; or

(D) Items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also included in this category.

(iv) Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.

(v) Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals or testing of pharmaceuticals.

(vi) Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.

(vii) Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

**"Medium HMIWI"** means:

(i) Except as provided in paragraph (ii);

(A) An HMIWI whose maximum design waste burning capacity is more than 200 pounds per hour but less than or equal to 500 pounds per hour; or

(B) A continuous or intermittent HMIWI whose maximum charge rate is more than 200 pounds per hour but less than or equal to 500 pounds per hour; or

(C) A batch HMIWI whose maximum charge rate is more than 1,600 pounds per day but less than or equal to 4,000 pounds per day.

(ii) The following are not medium HMIWI:

(A) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour or more than 500 pounds per hour; or

(B) A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day or less than or equal to 1,600 pounds per day.

**"Minimum dioxin/furan sorbent flow rate"** means 90 percent of the highest 3-hour average dioxin/furan sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.

**"Minimum Hg sorbent flow rate"** means 90 percent of the highest 3-hour average Hg sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit.

**"Minimum hydrogen chloride (HCl) sorbent flow rate"** means 90 percent of the highest 3-hour average HCl sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit.

**"Minimum horsepower or amperage"** means 90 percent of the highest 3-hour average horsepower or amperage to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limits.

**"Minimum pressure drop across the wet scrubber"** means 90 percent of the highest 3-hour average pressure drop across the wet scrubber PM control device (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM emission limit.

**"Minimum scrubber liquor flow rate"** means 90 percent of the highest 3-hour average liquor flow rate at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

**"Minimum scrubber liquor pH"** means 90 percent of the highest 3-hour average liquor pH at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the HCl emission limit.

**"Minimum secondary chamber temperature"** means 90 percent of the highest 3-hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, CO, or dioxin/furan emission limits.

**"Modification or Modified HMIWI"** means any change to an HMIWI unit after the effective date of these standards such that:

(i) The cumulative costs of the modifications, over the life of the unit, exceed 50 percent of the original cost of the construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs, or

(ii) The change involves a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under section 129 or section 111.

**"Operating day"** means a 24-hour period between 12:00 midnight and the following midnight during which any amount of hospital waste or medical/infectious waste is combusted at any time in the HMIWI.

**"Operation"** means the period during which waste is combusted in the incinerator excluding periods of startup or shutdown.

**"Particulate matter or PM"** means the total particulate matter emitted from an HMIWI as measured by EPA Reference Method 5 or EPA Reference Method 29.

**"Pathological waste"** means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

**"Primary chamber"** means the chamber in an HMIWI that receives waste material, in which the waste is ignited, and from which ash is removed.

**"Pyrolysis"** means the endothermic gasification of hospital waste and/or medical/infectious waste using external energy.

**"Responsible official"** means one of the following:

(i) For a corporation:

(A) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(B) A duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(I) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(II) the delegation of authority to such representative is approved in advance by the Division;

(ii) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(iii) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

**"Secondary chamber"** means a component of the HMIWI that receives combustion gases from the primary chamber and in which the combustion process is completed.

**"Shutdown"** means the period of time after all waste has been combusted in the primary chamber. For continuous HMIWI, shutdown shall commence no less than 2 hours after the last charge to the incinerator. For intermittent HMIWI, shutdown shall commence no less than 4 hours after the last charge to the incinerator. For batch HMIWI, shutdown shall commence no less than 5 hours after the high-air phase of combustion has been completed.

**"Small HMIWI"** means:

(i) Except as provided in (ii);

(A) An HMIWI whose maximum design waste burning capacity is less than or equal to 200 pounds per hour; or

(B) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour; or

(C) A batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day.

(ii) The following are not small HMIWI:

(A) A continuous or intermittent HMIWI whose maximum charge rate is more than 200 pounds per hour;

(B) A batch HMIWI whose maximum charge rate is more than 1,600 pounds per day.

**"Standard conditions"** means a temperature of 20°C and a pressure of 101.3 kilopascals.

**"Standard Metropolitan Statistical Area or SMSA"** means any areas listed in OMB Bulletin No. 93-17 entitled "Revised Statistical Definitions for Metropolitan Areas" dated June 30, 1993.

**"Startup"** means the period of time between the activation of the system and the first charge to the unit. For batch HMIWI, startup means the period of time between activation of the system and ignition of the waste.

**"Wet scrubber"** means an add-on air pollution control device that utilizes an alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

**(b) Applicability:**

(i) Except as provided in paragraphs (ii) through (viii) of this subsection, the designated facility to which this regulation applies is each individual HMIWI for which construction was commenced on or before June 20, 1996.

(ii) A combustor is not subject to this subpart during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste (all defined in Chapter 4, Section 5(a)) is burned, provided the owner or operator of the combustor:

(A) Notifies the Administrator of an exemption claim; and

(B) Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned.

(iii) Any co-fired combustor (defined in Chapter 4, Section 5(a)) is not subject to this subpart if the owner or operator of the co-fired combustor:

(A) Notifies the Administrator of an exemption claim;

(B) Provides an estimate of the relative weight of hospital waste, medical/infectious waste, and other fuels and/or wastes to be combusted; and

(C) Keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted at the co-fired combustor.

(iv) Any combustor required to have a permit under Section 3005 of the Solid Waste Disposal Act is not subject to this subpart.

(v) Any combustor which meets the applicability requirements under subpart Cb, Ea, or Eb of 40 CFR part 60 (standards or guidelines for certain municipal waste combustors) is not subject to Chapter 4, Section 5.

(vi) Any pyrolysis unit (defined in Chapter 4, Section 5(a)) is not subject to this subpart.

(vii) Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this subpart.

(viii) Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with emission limits under this section are not considered a modification and do not result in an existing HMIWI unit becoming subject to the provisions of 40 CFR part 60, subpart Ec.

(ix) Beginning September 15, 2000, designated facilities subject to this subpart shall operate pursuant to a permit issued under Chapter 6, Section 3.

**(c) Emission limits:**

(i) No owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain stack emissions in excess of the limits presented in Table 1 of this section, except as provided for in paragraph (ii) of this subsection.

Table 1. Emission Limits For Small, Medium, and Large HMIWI

Pollutant	Units (7 percent oxygen, dry basis)	Emission Limits		
		HMIWI Size		
		Small	Medium	Large
Particulate matter	Milligrams per dry standard cubic meter (grains per dry standard cubic foot).	115 (0.05)	69 (0.03)	34 (0.015)
Carbon monoxide	Parts per million by volume.	40	40	40
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet).	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)
Hydrogen chloride	Parts per million by volume or percent reduction.	100 or 93%	100 or 93%	100 or 93%
Sulfur dioxide	Parts per million by volume.	55	55	55
Nitrogen oxides	Parts per million by volume.	250	250	250
Lead	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction.	1.2 (0.52) or 70%	1.2 (0.52) or 70%	1.2 (0.52) or 70%
Cadmium	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction.	0.16 (0.07) or 65%	0.16 (0.07) or 65%	
Mercury	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction.	0.55 (0.24) or 85%	0.55 (0.24) or 85%	0.55 (0.24) or 85%

(ii) No owner or operator of any small HMIWI which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (defined in Chapter 4, Section 5(a)) and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste shall cause to be discharged into the atmosphere from that affected facility any gases that contain stack emissions in excess of the limits presented in Table 2 of this section. The 2,000 lb/week limitation does not apply during performance tests.

Table 2. Emissions Limits For Small HMIWI Which Meet the Criteria Under Chapter 4(c)(ii)

Pollutant	Units (7 percent oxygen, dry basis)	HMIWI Emission Limits
Particulate matter	Milligrams per dry standard cubic meter (grains per dry standard cubic foot).	197 (0.086)
Carbon monoxide	Parts per million by volume.	40
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet).	800 (350) or 15 (6.6)
Hydrogen chloride	Parts per million by volume.	3100
Sulfur dioxide	Parts per million by volume.	55
Nitrogen oxides	Parts per million by volume.	250
Lead	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet).	10 (4.4)
Cadmium	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet).	4 (1.7)
Mercury	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet).	7.5 (3.3)

(iii) No owner or operator of an affected facility shall cause to be discharged into the atmosphere from the stack of that affected facility any gases that exhibit greater than 10 percent opacity (6-minute block average).

***(d) Operator training and qualification requirements:***

(i) No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within 1 hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.

(ii) Operator training and qualification shall be obtained through a State-approved program or by completing the requirements included in paragraphs (iii) through (vii) of this subsection.

(iii) Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

(A) 24 hours of training on the following subjects:

(I) Environmental concerns, including pathogen destruction and types of emissions;

(II) Basic combustion principles, including products of combustion;

(III) Operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

(IV) Combustion controls and monitoring;

(V) Operation of air pollution control equipment and factors affecting performance (if applicable);

(VI) Methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures (where applicable);

(VII) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

(VIII) Actions to correct malfunctions or conditions that may lead to malfunction;

(IX) Bottom and fly ash characteristics and handling procedures;

(X) Applicable Federal, State, and local regulations;

(XI) Work safety procedures;

(XII) Pre-startup inspections; and

(XIII) Recordkeeping requirements.

(B) An examination designed and administered by the instructor.

(C) Reference material distributed to the attendees covering the course topics.

(iv) Qualification shall be obtained by:

(A) Completion of a training course that satisfies the criteria under paragraph (iii) of this subsection; and

(B) Either 6 months experience as an HMIWI operator, 6 months experience as a direct supervisor of an HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators.

(v) Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

(vi) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least 4 hours covering, at a minimum, the following:

- (A) Update of regulations;
- (B) Incinerator operation, including startup and shutdown procedures;
- (C) Inspection and maintenance;
- (D) Responses to malfunctions or conditions that may lead to malfunction; and
- (E) Discussion of operating problems encountered by attendees.

(vii) A lapsed qualification shall be renewed by one of the following methods:

(A) For a lapse of less than 3 years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (vi) of this subsection.

(B) For a lapse of 3 years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (iii) of this subsection.

(viii) The owner or operator of an affected facility shall maintain documentation at the facility that addresses the following:

- (A) Summary of the applicable standards under this subpart;
- (B) Description of basic combustion theory applicable to an HMIWI;
- (C) Procedures for receiving, handling, and charging waste;
- (D) HMIWI startup, shutdown, and malfunction procedures;

(E) Procedures for maintaining proper combustion air supply levels;

(F) Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;

(G) Procedures for responding to periodic malfunction or conditions that may lead to malfunction;

(H) Procedures for monitoring HMIWI emissions;

(I) Reporting and recordkeeping procedures; and

(J) Procedures for handling ash.

(ix) The owner or operator of an affected facility shall establish a program for reviewing the information listed in paragraph (viii) of this subsection annually with each HMIWI operator (defined in Chapter 4, Section 5(a)).

(A) The initial review of the information listed in paragraph (viii) of this subsection shall be conducted by April 15, 2000 or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.

(B) Subsequent reviews of the information listed in paragraph (viii) of this subsection shall be conducted annually.

(x) The information listed in paragraph (viii) of this subsection shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training shall be available for inspection by the State.

***(e) Waste management plan:***

(i) The owner or operator of an affected facility shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as paper, cardboard, plastics, glass, battery, or metal recycling; or purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions

expected to be achieved, and any other environmental or energy impacts they might have. The American Hospital Association publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" shall be considered in the development of the waste management plan. This document is available for purchase from the American Hospital Association (AHA) Service Inc., Post Office Box 92683, Chicago, Illinois 60675-2683.

***(f) Inspection requirements:***

(i) Each small HMIWI subject to Chapter 4, Section 5(c)(ii) shall undergo an initial equipment inspection within one year of EPA's approval of this plan, or by September 15, 2000, whichever occurs first.

(A) At a minimum, an inspection shall include the following:

(I) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation; clean pilot flame sensor, as necessary;

(II) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

(III) Inspect hinges and door latches, and lubricate as necessary;

(IV) Inspect dampers, fans, and blowers for proper operation;

(V) Inspect HMIWI door and door gaskets for proper sealing;

(VI) Inspect motors for proper operation;

(VII) Inspect primary chamber refractory lining; clean and repair/replace lining as necessary;

(VIII) Inspect incinerator shell for corrosion and/or hot spots;

(IX) Inspect secondary/tertiary chamber and stack, clean as necessary;

(X) Inspect mechanical loader, including limit switches, for proper operation, if applicable;

(XI) Visually inspect waste bed (grates), and repair/seal, as appropriate;

(XII) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(XIII) Inspect air pollution control device(s) for proper operation, if applicable;

(XIV) Inspect waste heat boiler systems to ensure proper operation, if applicable;

(XV) Inspect bypass stack components;

(XVI) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment;

(XVII) Generally observe that the equipment is maintained in good operating condition.

(B) Within 10 operating days following an equipment inspection all necessary repairs shall be completed unless the owner or operator obtains written approval from the State agency establishing a date whereby all necessary repairs of the designated facility shall be completed.

(ii) Each small HMIWI subject to the emission limits under Chapter 4, Section 5(c)(ii) shall undergo an equipment inspection annually (no more than 12 months following the previous annual equipment inspection), as outlined in paragraphs (i)(A) and (i)(B) of this subsection.

***(g) Compliance, performance testing, and monitoring requirements:***

(i) Except as provided in paragraph (ii) of this subsection, requirements for compliance and performance testing are as follows:

(A) The emission limits under this subpart apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged to the affected facility during startup, shutdown, or malfunction.

(B) The owner or operator of an affected facility shall conduct an initial performance test as required under Chapter 5, Section 2(h) to determine compliance with the emission limits using the procedures and test methods listed in paragraphs (B)(I)

through (B)(XI) of this subsection. The use of the bypass stack during a performance test shall invalidate the performance test.

(I) All performance tests shall consist of a minimum of three test runs conducted under representative operating conditions.

(II) The minimum sample time shall be 1 hour per test run unless otherwise indicated.

(III) EPA Reference Method 1 of appendix A, 40 CFR part 60 shall be used to select the sampling location and number of traverse points.

(IV) EPA Reference Method 3 or 3A of appendix A, 40 CFR part 60 shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3 or 3A of appendix A, 40 CFR part 60 shall be used simultaneously with each reference method.

(V) The pollutant concentrations shall be adjusted to 7 percent oxygen using the following equation:

$$C_{\text{adj}} = C_{\text{meas}} (20.9 - 7) / (20.9 - \%O_2) \text{ where:}$$

- $C_{\text{adj}}$  = pollutant concentration adjusted to 7 percent oxygen;
- $C_{\text{meas}}$  = pollutant concentration measured on a dry basis  
(20.9 - 7) = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);
- 20.9 = oxygen concentration in air, percent; and
- $\%O_2$  = oxygen concentration measured on a dry basis, percent.

(VI) EPA Reference Method 5 or 29 of appendix A, 40 CFR part 60 shall be used to measure the particulate matter emissions.

(VII) EPA Reference Method 9 of appendix A, 40 CFR part 60 shall be used to measure stack opacity.

(VIII) EPA Reference Method 10 or 10B of appendix A, 40 CFR part 60 shall be used to measure the CO emissions.

(IX) EPA Reference Method 23 of appendix A, 40 CFR part 60 shall be used to measure total dioxin/furan emissions. The minimum sample time shall be 4 hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans, under Chapter 4, Section 5(c)(i), the following procedures shall be used to determine compliance:

(1.) Measure the concentration of each dioxin/furan tetra-through octa-congener emitted using EPA Reference Method 23.

(2.) For each dioxin/furan congener measured in accordance with paragraph (B)(IX)(1.) of this subsection, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this subpart.

Table 3. Toxic Equivalency Factors

Dioxin/Furan Congener	Toxic Equivalency Factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

(3.) Sum the products calculated in accordance with paragraph (B)(IX)(2.) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(X) EPA Reference Method 26 of appendix A, 40 CFR part 60 shall be used to measure HCl emissions. If the affected facility has selected the percentage reduction standards for HCl under Chapter 4, Section 5(c)(i), the percentage reduction in HCl emissions (% R<sub>HCl</sub>) is computed using the following formula:

$$(\% R_{HCl}) = \left( \frac{E_i - E_a}{E_i} \right) \times 100$$

Where:

- $\%R_{\text{HCl}}$  = percentage reduction of HCl emissions achieved;
- $E_i$  = HCl emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and
- $E_o$  = HCl emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(XI) EPA Reference Method 29 of appendix A, 40 CFR part 60 shall be used to measure Pb, Cd, and Hg emissions. If the affected facility has selected the percentage reduction standards for metals under Chapter 4, Section 5(c)(i), the percentage reduction in emissions ( $\% R_{\text{metal}}$ ) is computed using the following formula:

$$(\% R_{\text{metal}}) = \left( \frac{E_i - E_o}{E_i} \right) \times 100$$

Where:

- $\%R_{\text{metal}}$  = percentage reduction of metal emission (Pb, Cd and Hg) achieved;
- $E_i$  = metal emission concentration (Pb, Cd and Hg) measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and
- $E_o$  = metal emission concentration (Pb, Cd and Hg) measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(C) The initial performance test shall be completed by September 15, 2000. Following the date on which the initial performance test is completed, the owner or operator of an affected facility shall:

(I) Determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in paragraph (B) of this subsection.

(II) Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in paragraph (B) of this subsection. If all three performance tests over a 3-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent 2 years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every

third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional 2 years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a 3-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

(III) Facilities using a CEMS to demonstrate compliance with any of the emission limits under Chapter 4, Section 5(c)(i) shall:

(1.) Determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours (not including startup, shutdown, or malfunction).

(2.) Operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR part 60.

(D) The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall:

(I) Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this subpart for each control system, as site-specific operating parameters during the initial performance test to determine compliance with the emission limits; and

(II) After September 15, 2000, or the date on which the initial performance test is completed, whichever date comes first, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 of this subpart and measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

(E) Except as provided in paragraph (H) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter:

(I) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a

3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(II) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(III) Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(IV) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(V) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(F) Except as provided in paragraph (H) of this section, for affected facilities equipped with a wet scrubber:

(I) Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM emission limit.

(II) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(III) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(IV) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(V) Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(VI) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(G) Except as provided in paragraph (H) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber:

(I) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(II) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(III) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(IV) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(V) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(H) The owner or operator of an affected facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraphs (E), (F), or (G) of this section.

(I) The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet

scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Chapter 4, Section 5(c)(i) shall petition the EPA Administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the EPA Administrator.

(J) The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The Administrator may request a repeat performance test at any time.

(ii) Any small HMIWI subject to the emission limits under Chapter 4, Section 5(c)(ii) shall meet the following compliance and performance testing requirements (The 2000 lb/week limitation does not apply during performance tests):

(A) The emission limits under this subpart apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged to the affected facility during startup, shutdown, or malfunction.

(B) The owner or operator of an affected facility shall conduct an initial performance test as required under Chapter 5, Section 2(h) to determine compliance with the emission limits using the procedures and test methods listed in paragraphs (B)(I) through (B)(X) of this subsection. The use of the bypass stack during a performance test shall invalidate the performance test.

(I) All performance tests shall consist of a minimum of three test runs conducted under representative operating conditions.

(II) The minimum sample time shall be 1 hour per test run unless otherwise indicated.

(III) EPA Reference Method 1 of appendix A, 40 CFR part 60 shall be used to select the sampling location and number of traverse points.

(IV) EPA Reference Method 3 or 3A of appendix A, 40 CFR part 60 shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3 or 3A of appendix A, 40 CFR part 60 shall be used simultaneously with each reference method.

(V) The pollutant concentrations shall be adjusted to 7 percent oxygen using the following equation:

$$C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \%O_2) \text{ where:}$$

- $C_{adj}$  = pollutant concentration adjusted to 7 percent oxygen;
- $C_{meas}$  = pollutant concentration measured on a dry basis (20.9 - 7) = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);
- 20.9 = oxygen concentration in air, percent; and
- $\%O_2$  = oxygen concentration measured on a dry basis, percent.

(VI) EPA Reference Method 5 or 29 of appendix A, 40 CFR part 60 shall be used to measure the particulate matter emissions.

(VII) EPA Reference Method 9 of appendix A, 40 CFR part 60 shall be used to measure stack opacity.

(VIII) EPA Reference Method 10 or 10B of appendix A, 40 CFR part 60 shall be used to measure the CO emissions.

(IX) EPA Reference Method 23 of appendix A, 40 CFR part 60 shall be used to measure total dioxin/furan emissions. The minimum sample time shall be 4 hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans, under Chapter 4, Section 5(c)(ii), the following procedures shall be used to determine compliance:

(1.) Measure the concentration of each dioxin/furan tetra-through octa-congener emitted using EPA Reference Method 23.

(2.) For each dioxin/furan congener measured in accordance with paragraph (B)(IX)(1.) of this subsection, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this subpart.

(3.) Sum the products calculated in accordance with paragraph (B)(IX)(2.) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(X) EPA Reference Method 29 of appendix A, 40 CFR part 60 shall be used to measure Hg emissions. If the affected facility has selected the percentage reduction standards for metals under Chapter 4, Section 5(c) the percentage reduction in emissions ( $\% R_{metal}$ ) is computed using the following formula:

$$(\% R_{\text{metal}}) = \left( \frac{E_i - E_o}{E_i} \right) \times 100$$

Where:

- $\% R_{\text{metal}}$  = percentage reduction of metal emission (Hg) achieved;
- $E_i$  = metal emission concentration (Hg) measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and
- $E_o$  = metal emission concentration (Hg) measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(C) After September 15, 2000, or the date on which the initial performance test is completed, whichever date comes first, the owner or operator of an affected facility shall:

(I) Determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in paragraph (B) of this subsection.

(D) Establish maximum charge rate and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits.

(E) After September 15, 2000, or the date on which the initial performance test is completed, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameter(s).

(F) Except as provided in paragraph (ii)(G) of this subsection, operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits.

(G) The owner or operator of a designated facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission

limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under paragraph (ii)(F) of this subsection.

**(iii) Monitoring requirements:** Except as provided in paragraph (iv) of this subsection, requirements for compliance and performance testing are as follows:

(A) The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 4 of this section such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table 4 of this section at all times except during periods of startup and shutdown.

Table 4. Operating Parameters to be Monitored and Minimum Measurement and Recording Frequencies.

Operating Parameters To Be Monitored	Minimum Frequency		Control System		
	Data Measurement	Data Recording	Dry Scrubber Followed By Fabric Filter	Wet Scrubber	Dry Scrubber Followed By Fabric Filter and Wet Scrubber
Maximum operating parameters:					
Maximum charge rate	Continuous	1xhour	✓	✓	✓
Maximum fabric filter inlet temperature	Continuous	1xminute	✓		✓
Maximum flue gas temperature	Continuous	1xminute	✓	✓	
Minimum operating parameters:					
Minimum secondary chamber temperature	Continuous	1xminute	✓	✓	✓
Minimum dioxin/furan sorbent flow rate	Hourly	1xhour	✓		✓
Minimum HCL sorbent flow rate	Hourly	1xhour	✓		✓
Minimum mercury (Hg) sorbent flow rate	Hourly	1xhour	✓		✓
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber	Continuous	1xminute		✓	✓
Minimum scrubber liquor flow rate	Continuous	1xminute		✓	✓
Minimum scrubber liquor pH	Continuous	1xminute		✓	✓

(B) The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.

(C) The owner or operator of an affected facility using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Chapter 4, Section 5(c) shall install, calibrate (to the manufacturers' specifications),

maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to Chapter 4, Section 5(g)(i)(I).

(D) The owner or operator of an affected facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste.

(iv) Any small HMIWI subject to the emission limits under Chapter 4, Section 5(c)(ii) shall meet the following monitoring requirements:

(A) Install, calibrate (to manufacturers' specifications), maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation.

(B) Install, calibrate (to manufacturers' specifications), maintain, and operate a device which automatically measures and records the date, time, and weight of each charge fed into the HMIWI.

(C) The owner or operator of a designated facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating hours per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.

***(h) Reporting and recordkeeping requirements:.***

(i) Except as provided in paragraph (ii) of this subsection, requirements for reporting and recordkeeping are as follows:

(A) The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years:

(I) Calendar date of each record;

(II) Records of the following data:

- (1.) Concentrations of any pollutant listed in Chapter 4, Section 5 (c)(i) or measurements of opacity as determined by the continuous emission monitoring system (if applicable);
- (2.) HMIWI charge dates, times, and weights and hourly charge rates;
- (3.) Fabric filter inlet temperatures during each minute of operation, as applicable;
- (4.) Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;
- (5.) Amount and type of Hg sorbent used during each hour of operation, as applicable;
- (6.) Amount and type of HCl sorbent used during each hour of operation, as applicable;
- (7.) Secondary chamber temperatures recorded during each minute of operation;
- (8.) Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;
- (9.) Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;
- (10.) Pressure drop across the wet scrubber system during each minute of operation, as applicable,
- (11.) Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;
- (12.) pH at the inlet to the wet scrubber during each minute of operation, as applicable,
- (13.) Records indicating use of the bypass stack, including dates, times, and durations, and
- (14.) For affected facilities complying with Sections 37(g)(i)(I) and 37(g)(iii)(C), the owner or operator shall maintain all operating parameter data collected.

(III) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (A)(II) of this subsection have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

(IV) Identification of calendar days, times and durations of malfunctions, a description of the malfunction and the corrective action taken.

(V) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (A)(II) of this subsection exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

(VI) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

(VII) Records showing the names of HMIWI operators who have completed review of the information in Chapter 4, Section 5(d)(viii) as required by Chapter 4, Section 5(d)(ix), including the date of the initial review and all subsequent annual reviews;

(VIII) Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;

(IX) Records showing the names of the HMIWI operators who have met the criteria for qualification under Chapter 4, Section 5(d) and the dates of their qualification; and

(X) Records of calibration of any monitoring devices as required under Chapter 4, Section 5(g)(iii)(A), (B) and (C).

(B) The owner or operator of an affected facility shall submit the information specified in paragraphs (B)(I) through (B)(III) of this section no later than 60 days following the initial performance test. All reports shall be signed by the responsible official, as defined in Chapter 4, Section 5(a).

(I) The initial performance test data as recorded under Chapter 4, Section 5(g)(i)(B)(I - XI), as applicable.

(II) The values for the site-specific operating parameters established pursuant to Chapter 4, Section 5(g)(i)(D) or (I) as applicable.

(III) The waste management plan as specified in Chapter 4, Section 5(e).

(C) An annual report shall be submitted 1 year following the submission of the information in paragraph (B) of this section and subsequent reports shall be submitted no more than 12 months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (C)(I) through (C)(VIII) of this section. All reports shall be signed by the responsible official, as defined in Chapter 4, Section 5(a).

(I) The values for the site-specific operating parameters established pursuant to Chapter 4, Section 5(g)(i)(D) or (I) as applicable.

(II) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to Chapter 4, Section 5(g)(i)(D) or (I) as applicable.

(III) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to Chapter 4, Section 5(g)(i)(D) or (I) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

(IV) Any information recorded under paragraphs (A)(III) through (A)(V) of this subsection for the calendar year being reported.

(V) Any information recorded under paragraphs (A)(III) through (A)(V) of this subsection for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

(VI) If a performance test was conducted during the reporting period, the results of that test.

(VII) If no exceedances or malfunctions were reported under paragraphs (A)(III) through (A)(V) of this section for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

(VIII) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

(D) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (A)(III) through (A)(V) of this subsection no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (B) of this subsection. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the responsible official, as defined in Chapter 4, Section 5(a).

(E) All records specified under paragraph (A) of this section shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

(ii) Any small HMIWI subject to the emission limits under Chapter 4, Section 5(c)(ii) shall meet the following reporting and recordkeeping requirements:

(A) Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the State regulatory agency; and

(B) Submit an annual report containing information recorded under paragraph (ii)(A) of this subsection no later than 60 days following the year in which data were collected. Subsequent reports shall be sent no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements under Chapter 6, Section 3, the owner or operator must submit these reports semiannually). The report shall be signed by the responsible official, as defined in Chapter 4, Section 5(a).

*(i) Compliance times.*

(i) Except as provided in paragraphs (ii) and (iii) of this subsection, all designated facilities shall comply with all requirements of this plan within one year of EPA's approval of this plan, or by September 15, 2000, whichever occurs first.

(ii) Any designated facility demonstrating measurable and enforceable incremental steps of progress towards compliance, planning to install the necessary air pollution control equipment must meet a compliance date within three years of EPA's approval of this plan, or by September 15, 2002, whichever occurs first. Measurable and enforceable activities necessary for this demonstration shall include:

(A) Date for submitting a petition for site-specific operating parameters under Chapter 4, Section 5(g)(i)(I) of this part.

(B) Date for obtaining the major components of the air pollution control device(s);

(C) Date for initiation of installation of the air pollution control device(s);

(D) Date for initial startup of the air pollution control device(s);  
and

(E) Date for initial compliance test(s) of the air pollution control device(s).

(iii) A designated facility petitioning the state for an extension beyond the compliance times required in paragraph (i) of this subsection shall:

(A) submit the following information in time to allow the State adequate time to grant or deny the extension within one year of EPA's approval of this plan, or by September 15, 2000, whichever occurs first.

(I) Documentation of the analyses undertaken to support the need for an extension, including an explanation of why up to three years after EPA approval of the State plan or September 15, 2002, whichever is first, is sufficient time to comply while within one year after EPA approval of the State Plan or September 15, 2000, whichever is first, is not sufficient. The documentation shall also include an evaluation of the option to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

(II) Documentation of measurable and enforceable incremental steps of progress to be taken towards compliance with the emission guidelines.

(B) The Administrator of the Air Quality Division will grant or deny all extensions; and

(C) If an extension is granted, the designated facility shall comply with the emission guidelines within three years of EPA's approval of this plan, or by September 15, 2002, whichever occurs first.

(iv) A designated facility shall comply with the Operator training and qualification guidelines and Inspection guidelines within one year of EPA's approval of this plan, or by September 15, 2000, whichever occurs first.