

CHAPTER Env-A 3500 HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATION

Statutory Authority: RSA 125-C:4, I

PART Env-A 3501 PURPOSE

Env-A 3501.01 Purpose. The purpose of this chapter is to establish emission standards for existing small remote, small, medium, and large hospital/medical/infectious waste incinerators (HMIWI) for purposes of implementing sections 111(d) and 129 of the Clean Air Act, 42 U.S.C. 7401, et seq.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3502 APPLICABILITY

Env-A 3502.01 Applicability.

(a) This chapter shall apply to each individual hospital/medical/infectious waste incinerator unit (HMIWI unit) for which construction was commenced on or before June 20, 1996.

(b) This chapter shall apply to the following 4 distinct sizes of HMIWI as defined in Env-A 3503.01:

- (1) Small, remote;
- (2) Small;
- (3) Medium; and
- (4) Large.

(c) A HMIWI unit shall not be subject to this chapter during periods when only pathological waste, low-level radioactive waste, or chemotherapeutic waste, or any combination thereof, is burned, provided the owner or operator of the unit:

- (1) Notifies the department of an exemption claim; and
- (2) Keeps records on a calendar quarter basis, for a minimum of 5 years, of the periods of time when only pathological waste, low-level radioactive waste, or chemotherapeutic waste, or any combination thereof, is burned.

(d) A HMIWI unit that meets the definition of a co-fired combustor as defined in Env-A 3503.01(g) shall not be subject to this chapter if the owner or operator of the unit:

- (1) Notifies the department of an exemption claim;
- (2) Provides a written estimate to the department that:
 - a. States the relative weight of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted; and
 - b. Is verifiable using the records required in (3), below; and
- (3) Keeps records on a calendar quarter basis, for a minimum of 5 years, 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.

(e) The following devices shall be exempt from the requirements of this chapter:

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- (1) Any combustor required to have a permit under the Solid Waste Disposal Act, 42 U.S.C. §6925;
- (2) Any combustor that meets the applicability requirements of 40 CFR 60 Subpart Cb, Ea, or Eb;
- (3) Any pyrolysis unit; or
- (4) Cement kilns firing hospital waste or medical/infectious waste or a combination thereof.

(f) Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with emission limits under this chapter shall not be considered a modification such that an existing HMIWI unit becomes subject to the provisions of 40 CFR 60 Subpart Ec, namely, New Source Performance Standards for hospital/medical/infectious waste incinerators.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3503 DEFINITIONS

Env-A 3503.01 Definitions. For the purpose of this chapter the following definitions shall apply:

(a) “Batch HMIWI” means “batch HMIWI” as defined in 40 CFR 60.51c, namely “an HMIWI that is designed such that neither waste charging nor ash removal can occur during combustion.”

(b) “Biologicals” means “biologicals” as defined in 40 CFR 60.51c, namely “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.”

(c) “Blood products” means “blood products” as defined in 40 CFR 60.51c, namely “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.”

(d) “Body fluids” means “body fluids” as defined in 40 CFR 60.51c, namely “liquid emanating or derived from humans and limited to blood; dialysate; amniotic, cerebrospinal, synovial, pleural, peritoneal and pericardial fluids; and semen and vaginal secretions.”

(e) “Bypass stack” means “bypass stack” as defined in 40 CFR 60.51c, namely “a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.”

(f) “Chemotherapeutic waste” means “chemotherapeutic waste” as defined in 40 CFR 60.51c, namely “waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.”

(g) “Co-fired combustor” means “co-fired combustor” as defined in 40 CFR 60.51c, namely “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.”

(h) “Continuous HMIWI” means “continuous HMIWI” as defined in 40 CFR 60.51c, namely “an HMIWI that is designed to allow waste charging and ash removal during combustion.”

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(i) “Dioxins/furans” means “dioxins/furans” as defined in 40 CFR 60.51c, namely “the combined emissions of tetra- through octa-chlorinated dibenzo-para-dioxins and dibenzofurans, as measured by EPA Reference Method 23.”

(j) “Dry scrubber” means “dry scrubber” as defined in 40 CFR 60.51c, namely “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.”

(k) “Fabric filter” or “Baghouse” means “fabric filter” or “baghouse” as defined in 40 CFR 60.51c, namely “an add-on air pollution control system that removes particulate matter (PM) and nonvaporous metals emissions by passing flue gas through filter bags.”

(l) “Facilities manager” means “facilities manager” as defined in 40 CFR 60.51c, namely “the individual in charge of purchasing, maintaining, and operating the HMIWI or the owner’s or operator’s representative responsible for the management of the HMIWI. Alternative titles may include director of facilities or vice president of support services.”

(m) “High-air phase” means “high-air phase” as defined in 40 CFR 60.51c, namely “the stage of the batch operating cycle when the primary chamber reaches and maintains maximum operating temperatures.”

(n) “Hospital” means “hospital” as defined in 40 CFR 60.51c, namely “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.”

(o) “Hospital/medical/infectious waste incinerator (HMIWI or HMIWI unit)” means “hospital/medical/infectious waste incinerator” or “HMIWI” or “HMIWI unit” as defined in 40 CFR 60.51c, namely “any device that combusts any amount of hospital waste and/or medical/infectious waste.”

(p) “Hospital waste” means “hospital waste” as defined in 40 CFR 60.51c, namely “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.”

(q) “Infectious agent” means “infectious agent” as defined in 40 CFR 60.51c, namely “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.”

(r) “Intermittent HMIWI” means “intermittent HMIWI” as defined in 40 CFR 60.51c, namely “an HMIWI that is designed to allow waste charging, but not ash removal, during combustion.”

(s) “Large HMIWI” means:

- (1) An HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour;
- (2) A continuous or intermittent HMIWI whose maximum charge rate is more than 500 pounds per hour; or
- (3) A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day.

(t) “Low-level radioactive waste” means “low-level radioactive waste” as defined in 40 CFR 60.51c, namely “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)).”

(u) “Maximum charge rate” means “maximum charge rate” as defined in 40 CFR 60.51c, namely:

(1) “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; or

(2) 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.”

(v) “Maximum fabric filter inlet temperature” means “maximum fabric filter inlet temperature” as defined in 40 CFR 60.51c, namely “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.”

(w) “Maximum flue gas temperature” means “maximum flue gas temperature” as defined in 40 CFR 60.51c, namely “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.”

(x) “Medical/infectious waste” means “medical/infectious waste” as defined in 40 CFR 60.51c, namely “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 (1) through (7) of this definition. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in part 261 of this chapter; household waste, as defined in Sec. 261.4(b)(1) of this chapter; 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 this chapter.

(1) 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.

(2) 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.

(3) 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.

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(4) 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.

(5) 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.

(6) 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.

(7) Unused sharps including the following unused, discard sharps: hypodermic needles, suture needles, syringes, and scalpel blades.”

(y) “Medium HMIWI” means:

(1) 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

(2) 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

(3) 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.

(z) “Minimum dioxin/furan sorbent flow rate” means “minimum dioxin/furan sorbent flow rate” as defined in 40 CFR 60.51c, namely “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.”

(aa) “Minimum Hg sorbent flow rate” means “minimum Hg sorbent flow rate” as defined in 40 CFR 60.51c, namely “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.”

(ab) “Minimum hydrogen chloride sorbent flow rate” means “minimum hydrogen chloride sorbent flow rate” as defined in 40 CFR 60.51c, namely “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.”

(ac) “Minimum horsepower or amperage” means “minimum horsepower or amperage” as defined in 40 CFR 60.51c, namely “90 percent of the highest 3-hour average horsepower or amperage to the wet scrubber (taken, at minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limits.”

(ad) “Minimum pressure drop across the wet scrubber” means “minimum pressure drop across the wet scrubber” as defined in 40 CFR 60.51c, namely “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.”

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(ae) “Minimum scrubber liquor flow rate” means “minimum scrubber liquor flow rate” as defined in 40 CFR 60.51c, namely “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.”

(af) “Minimum scrubber liquor pH” means “minimum scrubber liquor pH” as defined in 40 CFR 60.51c, namely “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.”

(ag) “Minimum secondary chamber temperature” means “minimum secondary chamber temperature” as defined in 40 CFR 60.51c, namely “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.”

(ah) “Modified HMIWI” means “modified HMIWI” as defined in 40 CFR 60.51c, namely “any change to an HMIWI unit after January 30, 1999 such that:

(1) The cumulative costs of the modifications, over the life of the unit, exceed 50 per centum 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

(2) 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 of the Clean Air Act.”

(ai) “Operating day” means “operating day” as defined in 40 CFR 60.51c, namely “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.”

(aj) “Operation” means “operation” as defined in 40 CFR 60.51c, namely “the period during which waste is combusted in the incinerator excluding periods of startup or shutdown.”

(ak) “Pathological waste” means “pathological waste” as defined in 40 CFR 60.51c, namely “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.”

(al) “Primary chamber” means “primary chamber” as defined in 40 CFR 60.51c, namely “the chamber in an HMIWI that receives waste material, in which the waste is ignited, and from which ash is removed.”

(am) “Pyrolysis” means “pyrolysis” as defined in 40 CFR 60.51c, namely “the endothermic gasification of hospital waste and/or medical/infectious waste using external energy.”

(an) “Secondary chamber” means “secondary chamber” as defined in 40 CFR 60.51c, namely “a component of the HMIWI that receives combustion gases from the primary chamber and in which the combustion process is completed.”

(ao) “Section 111(d)/129 state plan” means the written document required to be submitted to EPA following adoption of this chapter by the state and which implements the regulations controlling air pollutant emissions from hospital/medical/infectious waste incinerators, pursuant to this chapter.

(ap) “Shutdown” means “shutdown” as defined in 40 CFR 60.51c, namely “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.”

(aq) “Small HMIWI” means:

- (1) An HMIWI whose maximum design waste burning capacity is less than or equal to 200 pounds per hour;
- (2) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour; or
- (3) A batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day.

(ar) “Small, remote HMIWI” means any small HMIWI which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and burns less than 2,000 pounds per week of hospital waste and medical/infectious waste.

(as) “Standard Metropolitan Statistical Area (SMSA)” means “standard metropolitan statistical area” or “SMSA” as defined in 40 CFR 60.31e, namely “any areas listed in the Office of Management and Budget Bulletin No. 93-17 entitled “Revised Statistical Definitions for Metropolitan Areas” dated June 30, 1993.”

(at) “Startup” means “startup” as defined in 40 CFR 60.51c, namely “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.”

(au) “Toxic equivalency (TEQ)” means the product of the individual dioxin/furan compound concentrations and their respective toxic equivalency factor.

(av) “Toxic equivalency factor (TEF)” means the estimate of the toxicity of dioxin-like compounds, or congeners, relative to the toxicity of 2,3,7,8-TCDD, which is assigned a TEF of 1.0.

(aw) “Wet scrubber” means “wet scrubber” as defined in 40 CFR 60.51c, namely “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.”

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3504 CALCULATION OF MAXIMUM DESIGN WASTE BURNING CAPACITY

Env-A 3504.01 Calculation of Maximum Design Waste Burning Capacity.

(a) For the purposes of (c), below, to calculate the maximum design waste burning capacity of intermittent or continuous HMIWI units, the following shall apply:

- (1) “C” means the HMIWI capacity in lb/hr;
- (2) “P_v” means the primary chamber volume in ft³;
- (3) The primary chamber heat release factor in Btu/ft³/hr shall be 15,000; and
- (4) The standard waste heating value in Btu/lb shall be 8,500.

(b) For the purposes of (c), below, to calculate the maximum design waste burning capacity of batch HMIWI units, the following shall apply:

- (1) “C” means the HMIWI capacity in lb/hr;

- (2) “P_v” means the primary chamber volume in ft³;
- (3) The waste density in lb/ft³ shall be 4.5; and
- (4) The typical hours of operation of a batch HMIWI unit in hrs shall be 8.

(c) To calculate the maximum design waste burning capacity, the owner or operator of a HMIWI unit subject to the provisions of this chapter shall:

(1) For intermittent and continuous HMIWI, multiply the primary chamber volume by the primary chamber heat release factor and divide the product by the standard waste heating value, as in the formula below:

$$C = (P_v \times 15,000) / 8,500; \text{ or}$$

(2) For batch HMIWI, multiply the primary chamber volume by the waste density and divide the product by the typical hours of operation of a batch HMIWI unit, as in the formula below:

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

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3505 EMISSION LIMITS

Env-A 3505.01 Emission Limits for Small, Remote HMIWI.

(a) All small, remote HMIWI units shall comply with the emission limitations set forth in Table 3500-1 in (c), below.

(b) For purposes of Table 3500-1 in (c), below, when there is a choice between units of measurement for any of the pollutants listed, the HMIWI operator or owner shall choose the unit of measurement that applies most closely to the individual HMIWI unit.

(c) The emission limits for small, remote HMIWI shall be as set forth in Table 3500-1 below, based on 7 percent oxygen, dry basis:

TABLE 3500-1: EMISSION LIMITS FOR SMALL, REMOTE HMIWI

Pollutant	HMIWI Emission Limits
Particulate matter	197 milligrams per dry standard cubic meter, or 0.086 grains per dry standard cubic foot
Carbon monoxide	40 parts per million by volume
Dioxins/furans	If measured as total dioxins/furans, either: 800 nanograms per dry standard cubic meter total dioxins/furans; or 350 grains per billion dry standard cubic feet total dioxins/furans. If measured as toxic equivalency (TEQ), either: 15 nanograms per dry standard cubic meter TEQ; or 6.6 grains per billion dry standard cubic feet TEQ.
Hydrogen chloride	3100 parts per million by volume
Sulfur dioxide	55 parts per million by volume
Nitrogen oxides	250 parts per million by volume
Lead	10 milligrams per dry standard cubic meter; or

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	4.4 grains per thousand dry standard cubic feet
Cadmium	4 milligrams per dry standard cubic meter; or 1.7 grains per thousand dry standard cubic feet
Mercury	0.055 milligrams per dry standard cubic meter; or 0.024 grains per thousand dry standard cubic feet

(d) On or after the initial performance test is completed or required to be completed, whichever comes first, no owner or operator of a small, remote HMIWI unit shall cause to be discharged into the atmosphere from that HMIWI unit any gases that exhibit greater than 10 percent opacity, measured by 6 minute block average, using Method 9 from 40 CFR 60 Appendix A.

(e) The emission limits for small, remote HMIWI pursuant to this chapter shall 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 HMIWI unit during startup, shutdown, or malfunction.

Source. #6938, eff 1-30-99; amd by #7127, eff 10-30-99; ss by #8788, eff 1-5-07

Env-A 3505.02 Emission Limits for Small, Medium, and Large HMIWI.

(a) All small, medium, and large HMIWI units shall comply with the emission limitations set forth in Table 3500-2 in (c), below.

(b) For purposes of Table 3500-2 in (c), below, when there is a choice between units of measurement for any of the pollutants listed, the HMIWI operator or owner shall choose the units of measurement that applies most closely to the individual HMIWI unit.

(c) The emission limits for small, medium, and large HMIWI shall be as set forth in Table 3500-2 below, based on 7 percent oxygen, dry basis:

TABLE 3500-2: EMISSION LIMITS FOR SMALL, MEDIUM, AND LARGE HMIWI

Pollutant	Units	Emission limits		
		HMIWI size		
		Small	Medium	Large
Particulate matter	milligrams per dry standard cubic meter; or grains per dry standard cubic foot	115	69	34
		0.05	0.03	0.015
Carbon monoxide	parts per million by volume	40	40	40
Dioxins/furans	If measured as total dioxins/furans, either: nanograms per dry standard cubic meter total dioxins/furans; or grains per billion dry standard cubic feet total dioxins/furans.	125	125	125
		55	55	55
	If measured as toxic equivalency (TEQ), either: nanograms per dry standard cubic meter TEQ; or grains per billion dry standards cubic feet TEQ.	2.3	2.3	2.3
		1.0	1.0	1.0
Hydrogen chloride	parts per million by volume; or percent reduction	100	100	100
		93%	93%	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;	1.2	1.2	1.2

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	grains per thousand dry standard cubic feet; or percent reduction	0.52 70%	0.52 70%	0.52 70%
Cadmium	milligrams per dry standard cubic meter; grains per thousand dry standard cubic feet; or percent reduction	0.16 0.07 65%	0.16 0.07 65%	0.16 0.07 65%
Mercury	milligrams per dry standard cubic meter; or grains per thousand dry standard cubic feet;	0.055 0.024	0.055 0.024	0.055 0.024

(d) On or after the initial performance test is completed or required to be completed, whichever comes first, no owner or operator of a small, medium, or large HMIWI unit shall cause to be discharged into the atmosphere from that HMIWI unit any gases that exhibit greater than 10 percent opacity, measured by 6 minute block average using method 9 from 40 CFR 60 Appendix A.

(e) The emission limits for small, medium, or large HMIWI under this chapter shall 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 HMIWI unit during startup, shutdown, or malfunction.

Source. #6938, eff 1-30-99; amd by #7127, eff 10-30-99; ss by #8788, eff 1-5-07

PART Env-A 3506 OPERATOR TRAINING, QUALIFICATIONS AND REQUIREMENTS

Env-A 3506.01 Operator Training.

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

(b) Operator training shall be obtained through a state-approved program, such as that provided pursuant to Env-Sw 1600.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3506.02 Operator Qualifications and Requirements.

(a) Operator qualification shall be obtained through:

- (1) Completion of a training course that satisfies the criteria under Env-A 3506.01; and
- (2) Either 6 months experience as an HMIWI operator, 6 months experience as a direct supervisor of an HMIWI operator, or completion of at least 2 burn cycles, each under the observation of 2 qualified HMIWI operators.

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

(c) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an operator training update program as defined in Env-Sw 1602.10.

(d) As specified in RSA 149-M:6, XIII, a lapsed qualification shall be subject to one of the following provisions, as applicable:

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(1) For a lapse of less than 90 days, the HMIWI operator shall complete and pass a standard annual refresher course pursuant to (c), above; or

(2) For a lapse of 90 days or more, the HMIWI operator shall complete and pass a training course pursuant to Env-A 3506.01(b).

(e) The owner or operator of a HMIWI unit shall maintain a copy of Env-A 3500 and documentation of the following at the facility:

- (1) A description of basic combustion theory applicable to the particular HMIWI unit;
- (2) Procedures for receiving, handling, and charging waste;
- (3) HMIWI startup, shutdown, and malfunction procedures;
- (4) Procedures for maintaining proper combustion air supply levels;
- (5) Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this chapter;
- (6) Procedures for responding to periodic malfunction or conditions that might lead to malfunction;
- (7) Procedures for monitoring HMIWI emissions;
- (8) Reporting and record keeping procedures;
- (9) Procedures for handling ash; and
- (10) Records of training for all operators of the HMIWI unit.

(f) The owner or operator of a HMIWI unit shall establish a program for reviewing the information listed in (e), above, with each HMIWI operator in accordance with the following:

- (1) The initial review of information listed in (e), above, shall be conducted prior to assumption of responsibilities affecting HMIWI operation; and
- (2) Subsequent reviews of the information listed in (e), above, shall be conducted at least annually.

(g) The information listed in (e), above, shall be kept in a readily accessible location for all HMIWI operators, and shall be available for inspection by the department or EPA upon request.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3507 COMPLIANCE SCHEDULE - RESERVED

Source. #6938, eff 1-30-99

PART Env-A 3508 INCREMENTS OF PROGRESS - RESERVED

Source. #6938, eff 1-30-99

PART Env-A 3509 WASTE MANAGEMENT PLAN

Env-A 3509.01 Waste Management Plan.

(a) The owner or operator of a HMIWI unit shall prepare a waste management plan that identifies the feasibility and approach of the following:

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- (1) Separation of the solid waste components listed in (b), below, from the health care stream in order to reduce the amount of toxic emissions from incinerated waste;
 - (2) Recycling of the solid waste components listed in (b), below, from the health care stream;
 - (3) Purchasing recycled or recyclable products; and
 - (4) Identification of reasonably available additional waste management measures, taking into account:
 - a. The effectiveness of waste management measures already in place;
 - b. The costs of additional measures;
 - c. The emissions reductions expected to be achieved; and
 - d. Any other environmental or energy impacts they might have.
- (b) The solid waste components considered pursuant to (a)(1) and (2), above, shall include:
- (1) Paper;
 - (2) Plastics;
 - (3) Cardboard;
 - (4) Glass;
 - (5) Batteries;
 - (6) Metal; and
 - (7) Any other waste generated by the facility(ies) served by the HMIWI that is or becomes recyclable.

(c) In preparing the waste management plan pursuant to (a), above, the owner or operator of a HMIWI shall consider the reference material published by The American Hospital Association and entitled: "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities."

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3510 REQUIREMENTS FOR INSPECTION AND MAINTENANCE OF SMALL, REMOTE HMIWI

Env-A 3510.01 Inspections and Maintenance of Small, Remote HMIWI.

(a) The owner or operator of each small, remote HMIWI unit subject to the emission limits set forth in Env-A 3505.01(a) shall undertake a self-performed initial equipment inspection within one year following EPA approval of the section 111(d)/129 state plan.

(b) The owner or operator of each small, remote HMIWI subject to the emission limits set forth in Env-A 3505.01(a) shall undertake an annual equipment inspection and keep records pursuant to Env-A 3513.02, no more than 12 months after the initial equipment inspection or the previous annual equipment inspection using the inspection requirements set forth in Env-A 3510.02.

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(c) The owner or operator shall undertake such equipment maintenance and adjustments as are needed to ensure that all components are in proper working condition.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3510.02 Small, Remote HMIWI Inspection Coverage. Inspections pursuant to Env-A 3510.01 shall include the following:

- (a) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation;
- (b) Proper adjustment of primary and secondary chamber combustion air flow;
- (c) Inspection of hinges and door latches;
- (d) Inspection of dampers, fans, and blowers for proper operation;
- (e) Inspection of HMIWI door and door gaskets for proper sealing;
- (f) Inspection of motors for proper operation;
- (g) Inspection of primary chamber refractory lining;
- (h) Inspection of incinerator shell for corrosion and hot spots;
- (i) Inspection of secondary/tertiary chamber and stack;
- (j) Inspection of mechanical loader, including limit switches, for proper operation, if applicable;
- (k) Visual inspection of waste bed grates;
- (l) For the burn cycle that follows the inspection, documentation that the incinerator is operating properly and that any necessary adjustments have been made;
- (m) Inspection of air pollution control device or devices for proper operation, if applicable;
- (n) Inspection of waste heat boiler systems to ensure proper operation, if applicable;
- (o) Inspection of bypass stack components;
- (p) Proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
- (q) General observation that the equipment is maintained in good operating condition.

Source. #8788, eff 1-5-07

Env-A 3510.03 Small, Remote HMIWI Maintenance.

- (a) Maintenance of small, remote HMIWI units shall include the following, as applicable:
 - (1) Cleaning pilot flame sensors;
 - (2) Adjusting primary and secondary chamber combustion air flow;
 - (3) Lubrication of hinges and door latches;
 - (4) Repair or replacement of dampers, fans, and blowers;

- (5) Repair or replacement of HMIWI door gaskets;
- (6) Repair or replacement of motors;
- (7) Cleaning and repair or replacement of the primary chamber refractory lining;
- (8) Repair of incinerator shell for corrosion and/or hot spots;
- (9) Cleaning of secondary/tertiary chamber and stack;
- (10) Repair or replacement of mechanical loaders;
- (11) Repair or sealing of waste bed grates;
- (12) Repair or replacement or recalibration of air pollution control devices;
- (13) Repair or replacement of waste heat boiler systems;
- (14) Repair or replacement of bypass stack components;
- (15) Calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
- (16) Any other actions needed to ensure that the equipment is in good operating condition.

(b) All necessary repairs shall be completed within 10 operating days following an equipment inspection unless the owner or operator applies for a waiver in accordance with Env-A 205 and obtains written approval from the department establishing an alternative compliance date whereby all necessary repairs of the designated facility will be completed.

Source. #8788, eff 1-5-07

PART Env-A 3511 PERFORMANCE AND COMPLIANCE TESTING

Env-A 3511.01 Performance and Compliance Testing for Small, Remote HMIWI Units.

(a) The owner or operator of a small, remote HMIWI unit subject to the emission limits set forth in Env-A 3505.01(a) shall be subject to the following performance and compliance testing requirements:

- (1) Performance and compliance testing shall be conducted in accordance with Env-A 3511.02, other than Env-A 3511.02 (a)(4)g, (e), and (f) for hydrogen chloride and Env-A 3511.02 (a)(4)h, (g), and (h) for lead and cadmium only;
- (2) The annual performance testing procedure shall be conducted in accordance with Env-A 3511.03(a);
- (3) The maximum charge rate and minimum secondary chamber temperature shall be established as site-specific operating parameters during the initial performance test to determine compliance with the applicable emission limits pursuant to Env-A 3505.01(a); and
- (4) Following the date the initial performance test is completed or is required to be completed, the HMIWI unit shall 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 3 previous operating hours, at all times except during periods of startup, shutdown, and malfunction.

(b) The owner or operator of a small, remote HMIWI shall not be subject to the 2,000 lb/week limitation pursuant to Env-A 3503.01(ar) during performance tests.

Source. #6938, eff 1-30-99; amd by #7127, eff 10-30-99; ss by #8788, eff 1-5-07

Env-A 3511.02 Performance and Compliance Testing for Small, Medium, and Large HMIWI Units.

(a) The owner or operator of a small, medium, or large HMIWI unit shall conduct an initial performance test as required by 40 CFR 60.8 to determine compliance with the emission limits as set forth in Env-A 3505, using the following requirements, procedures, and test methods:

- (1) The use of a bypass stack during a performance test shall invalidate the performance test;
- (2) All performance tests shall consist of a minimum of 3 test runs conducted under the representative operating conditions;
- (3) The minimum sample time shall be one hour per test run unless otherwise stated; and
- (4) For the purposes of determining compliance with Env-A 3505, the following reference methods from 40 CFR 60 Appendix A shall be used:
 - a. Method 1 to select the sampling location and number of traverse points;
 - b. Method 3 or 3A for gas composition analysis, including measurement of oxygen concentration;
 - c. Method 5 to measure the particulate matter emissions;
 - d. Method 9 to measure stack opacity;
 - e. Method 10 or 10B to measure the carbon monoxide emissions;
 - f. Method 23 or the method described in (d), below, to measure total dioxins/furans emissions, which shall have a minimum sample time of 4 hours per test run;
 - g. Method 26 or the method described in (e), below, to measure hydrogen chloride emissions; and
 - h. Method 29 or the method described in (g), below, to measure lead, cadmium, and mercury emissions.

(b) To correct pollutant concentrations to 7 percent oxygen as specified in (c), below, the following shall apply:

- (1) “C_{adj}” means the pollutant concentration adjusted to 7 percent oxygen;
- (2) “C_{meas}” means the pollutant concentration measured on a dry basis;
- (3) The defined oxygen correction basis shall be 20.9 less a correction factor of 7;
- (4) The oxygen concentration in air shall be 20.9; and
- (5) “%O₂” means the oxygen concentration measured on a dry basis in percent.

(c) To correct pollutant concentrations to 7 percent oxygen, the HMIWI owner or operator subject to the provisions of this chapter shall calculate the defined oxygen correction basis, divide by the difference between 20.9 and %O₂, and then multiply the result by C_{meas}, as in the formula below:

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

(d) If the owner or operator of the HMIWI unit has selected the toxic equivalency standards for dioxins/furans under Env-A 3505, the following procedures shall be used to determine compliance with the dioxins/furans emission limit:

- (1) The concentration of each dioxin/furan tetra- through octa-congener listed in Table 3500-3, that is emitted, shall be measured using EPA Reference Method 23 in 40 CFR 60 Appendix A;
- (2) For each dioxin/furan congener measured in accordance with (1), above, the congener concentration shall be multiplied by its corresponding equivalency factor as specified in Table 3500-3; and
- (3) The products calculated in accordance with (2), above, shall be added to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(e) If the owner or operator of the HMIWI unit has selected the percentage reduction standards for hydrogen chloride pursuant to Env-A 3505.02, to calculate the percentage reduction in hydrogen chloride, then for the purposes of (f), below, the following shall apply:

- (1) “%R_{HCl}” means the percentage reduction of hydrogen chloride achieved;
- (2) “E_i” means the hydrogen chloride concentration measured at the control device inlet, corrected to 7 percent oxygen on dry basis; and
- (3) “E_o” means the hydrogen chloride emission concentration measured at the control device outlet, corrected to 7 percent oxygen on dry basis.

(f) To calculate the percentage reduction in hydrogen chloride, the owner or operator of the HMIWI unit shall calculate the difference between E_i and E_o, divide the difference by E_i, and multiply the result by 100, as in the formula below:

$$\%R_{HCl} = ((E_i - E_o)/E_i) \times 100$$

(g) If the owner or operator of the HMIWI unit has selected the percentage reduction standards for metals, in particular lead or cadmium, pursuant to Env-A 3505.02, to calculate the percentage reduction in metal, then for the purposes of (h), below, the following shall apply:

- (1) “%R_{metal}” means the percentage reduction of metal achieved;
- (2) “E_i” means the metal concentration measured at the control device inlet, corrected to 7 percent oxygen on dry basis; and
- (3) “E_o” means the metal emission concentration measured at the control device outlet, corrected to 7 percent oxygen on dry basis.

(h) To calculate the percentage reduction in metal, in particular lead or cadmium, the owner or operator of the HMIWI unit shall calculate the difference between E_i and E_o, divide the difference by E_i, and multiply the result by 100, as in the formula below:

$$\%R_{metal} = ((E_i - E_o)/E_i) \times 100$$

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(i) For the purposes of calculating toxic equivalency standards for dioxins/furans pursuant to (d), above, the toxic equivalency factors listed for each dioxin/furan congener in Table 3500-3, as set forth in (j), below, shall be used.

(j) Toxic equivalency factors for dioxin/furan congeners shall be as set forth in Table 3500-3, as follows:

TABLE 3500-3 TOXIC EQUIVALENCY FACTORS FOR DIOXIN/FURAN COGENERS

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

(k) Operating parameter limits shall not apply during performance tests.

(l) Operation at times other than during established repeat performance tests above the maximum charge rate or below the minimum secondary chamber temperature shall constitute violation of the established operating parameter(s).

(m) Operation of the HMIWI unit at times other than during established repeat performance tests above the maximum charge rate and below the minimum secondary chamber temperature simultaneously, both measured as 3-hour rolling averages except for batch units which shall be measured on a 24-hour basis, shall constitute violation of the particulate matter, carbon monoxide, and dioxin/furan emission limits.

(n) The owner or operator of an HMIWI unit shall conduct a repeat performance test within 30 days of violation of an applicable operating parameter(s) to demonstrate that the designated unit is no longer in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters as were in effect at the time that a violation was indicated.

Source. #6938, eff 1-30-99; amd by #7127, eff 10-30-99; ss by #8788, eff 1-5-07

Env-A 3511.03 Annual Performance Testing.

(a) Following the date the initial performance test is completed or required to be completed, whichever comes first, the owner or operator of any HMIWI unit subject to this chapter shall conduct an annual performance

test to determine compliance with the opacity limit set forth in Env-A 3505.01(d) or Env-A 3505.02(d) using the applicable procedures and test methods listed in Env-A 3511.02(a)(4)d.

(b) Performance tests measuring opacity shall be subject to the following:

- (1) Performance tests shall be conducted no more than 12 months following the previous performance test; and
- (2) The use of a bypass stack during a performance test shall invalidate the performance test.

(c) Following the date the initial performance test is completed or required to be completed, whichever comes first, the owner or operator of a small, medium or large HMIWI unit subject to this chapter shall conduct an annual performance test to determine compliance with the particulate matter, carbon monoxide, and hydrogen chloride emission limits set forth in Env-A 3505.02 using the applicable procedures and test methods listed in Env-A 3511.02 and subject to the conditions specified in (b)(1) and (2), above.

(d) If the performance tests for particulate matter, carbon monoxide, or hydrogen chloride conducted pursuant to (c), above, over a 3-year period indicate compliance with the applicable emission limit, the owner or operator may forego a performance test for that particular pollutant for the subsequent 2 years, subject to (e), below.

(e) At a minimum, the owner or operator of a small, medium, or large HMIWI unit subject to this chapter shall conduct a performance test for particulate matter, carbon monoxide, or hydrogen chloride every third year, no more than 36 months following the previous performance test.

(f) If a performance test conducted every third year indicates compliance with the emission limit for particulate matter, carbon monoxide, or hydrogen chloride, the HMIWI owner or operator may continue to forego a performance test for that pollutant for an additional 2 years, testing only every third year.

(g) If any performance test indicates non-compliance with the respective emission limit, the owner or operator shall conduct a performance test for that pollutant annually until all annual performance tests over a 3-year period indicate compliance with the emission limit.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3511.04 Demonstrating Compliance Using a Continuous Emissions Monitoring System. Owners or operators of HMIWI units subject to this chapter using a continuous emissions monitoring system (CEMS) to demonstrate compliance with any of the emission limits set forth in Env-A 3505.02 shall:

(a) Determine compliance with the appropriate emission limit or limits using a 12-hour rolling average, calculated each hour as the previous 12 operating hours, except during periods of startup, shutdown, or malfunction; and

(b) Operate all CEMS in accordance with the applicable procedures under 40 CFR 60 Appendices B and F and Env-A 800.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3511.05 Compliance Guidelines for Facilities with Air Pollution Control Devices.

(a) The owner or operator of a HMIWI unit that is equipped with an air pollution control device shall be subject to the compliance requirements and operating parameters set forth in this section.

(b) The following equipment, when installed on a HMIWI unit, shall qualify as an air pollution control device:

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- (1) A dry scrubber followed by a fabric filter;
- (2) A wet scrubber; or
- (3) A dry scrubber followed by a fabric filter and wet scrubber.

(c) The owner or operator of each HMIWI unit equipped with an air pollution control device as described in (b), above, shall:

- (1) Establish the appropriate maximum and minimum operating parameters, in accordance with Table 3500-4, for each control system, as site-specific operating parameters during the initial performance test to determine compliance with the emission limits set forth in Env-A 3505; and
- (2) Following the date the initial performance test is completed or is required to be completed, whichever date comes first, ensure the unit does not operate above any of the applicable maximum operating parameters or below any of the minimum operating parameters listed in Table 3500-4, measured as 3-hour rolling averages, calculated each hour as the average of the previous 3 operating hours, at all times except during startup, shutdown, malfunction, and during performance tests.

(d) For HMIWI units that are equipped with an air pollution control device as described in (b), above, operation above or below established maximum or minimum operating parameters, respectively, shall constitute violation of established operating parameters.

(e) For HMIWI units equipped with an air pollution control device as described in (b)(1), above, the following methods of operation shall constitute violation of the applicable emission limits:

- (1) For carbon monoxide, operating above the maximum charge rate and below the minimum secondary chamber temperature, simultaneously, both measured on a 3-hour rolling average;
- (2) For dioxins/furans, operating above the maximum fabric filter inlet temperature, above the maximum charge rate and below the minimum dioxin/furan sorbent flow rate, simultaneously, each measured on a 3-hour rolling average;
- (3) For hydrogen chloride, operating above the maximum charge rate and below the minimum hydrogen chloride sorbent flow rate, simultaneously, both measured on a 3-hour rolling average;
- (4) For mercury, operating above the maximum charge rate and below the minimum mercury sorbent flow rate, simultaneously, both measured on a 3-hour rolling average; or
- (5) For particulate matter, dioxins/furans, hydrogen chloride, lead, cadmium, and mercury, use of a bypass stack except during periods of startup, shutdown, or malfunction.

(f) For HMIWI units equipped with an air pollution control device as described in (b)(2), above, the following methods of operation shall constitute violation of the applicable emission limits:

- (1) For particulate matter, operation above the maximum charge rate and below the pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system, simultaneously, each measured on a 3-hour rolling average;
- (2) For carbon monoxide, operation above the maximum charge rate and below the minimum secondary chamber temperature, simultaneously, both measured as a 3 hour rolling average;

(3) For dioxins/furans, operation above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber flow rate, simultaneously, each measured on a 3-hour rolling average;

(4) For hydrogen chloride, operation above the maximum charge rate and below the minimum scrubber liquor pH, simultaneously, both measured on a 3-hour rolling average;

(5) For mercury, operation above the maximum flue gas temperature and above the maximum charge rate, simultaneously, both measured on a 3-hour rolling average; or

(6) For particulate matter, dioxins/furans, hydrogen chloride, lead, cadmium, and mercury, use of a bypass stack except during periods of startup, shutdown, or malfunction.

(g) For HMIWI units equipped with an air pollution control device as described in (b)(3), above, the following methods of operation shall constitute violation of the applicable emission limits:

(1) For carbon monoxide, operation above the maximum charge rate and below the minimum secondary chamber temperature, simultaneously, both measured on a 3-hour rolling average;

(2) For dioxins/furans, operation above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxins/furans sorbent flow rate, simultaneously, each measured as a 3-hour rolling average;

(3) For hydrogen chloride, operation above the maximum charge rate and below the minimum scrubber liquor pH, simultaneously, both measured as a 3-hour rolling average;

(4) For mercury, operation above the maximum charge rate and below the minimum mercury sorbent flow rate, simultaneously, both measured as a 3-hour rolling average; or

(5) For particulate matter, dioxins/furans, hydrogen chloride, lead, cadmium, and mercury, use of a bypass stack except during periods of startup, shutdown, or malfunction.

(h) The owner or operator of a HMIWI unit shall conduct a repeat performance test within 30 days of violation of an applicable operating parameter(s) to demonstrate that the HMIWI unit 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 this part.

(i) The owner or operator of a HMIWI unit using an air pollution control device other than those devices listed in (b), above, to comply with Env-A 3505 emission limits shall request other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter by submitting the following information in writing to the department:

(1) The identity and description of the facility, including the devices controlled with the air pollution control device;

(2) The proposed alternative operating parameters to be monitored; and

(3) Technical data and information demonstrating that the operating parameters requested to be monitored are as sufficient in monitoring operation of the alternative air pollution control device as those monitoring parameters used to monitor operation of the air pollution control devices listed in (b), above.

(j) The department shall approve a request submitted pursuant to (i), above, if the proposed alternative site-specific operating parameters are as sufficient in monitoring operation of the alternative air pollution control

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device as those monitoring parameters used to monitor operation of the air pollution control devices listed in (b), above.

(k) The department shall deny a request submitted pursuant to (i), above, if:

- (1) The owner or operator fails to provide complete and accurate information; or
- (2) The proposed alternative site-specific operating parameters fail to meet the criteria specified in (k), above.

(m) The owner or operator submitting a request to the department pursuant to (i), above, shall not conduct an initial performance test until after the request has been approved by the department.

(n) The owner or operator of a HMIWI unit who submitted a request pursuant to (i), above, may conduct a repeat performance test at any time to establish new values for the operating parameters.

(o) Minimum and maximum operating parameters as required in (c), above, shall be as specified in Table 3500-4, as follows:

TABLE 3500-4: 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	once per hour	3	3	3
Maximum fabric filter inlet temperature	continuous	once per minute	3		3
Maximum flue gas temperature	continuous	once per minute		3	3
Minimum operating parameters					
Minimum secondary chamber temperature	continuous	once per minute	3	3	3
Minimum dioxin/furan sorbent flow rate	hourly	once per hour	3		3
Minimum HCl sorbent flow rate	hourly	once per hour	3		3
Minimum mercury (Hg) sorbent flow rate	hourly	once per hour	3		3
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber	continuous	once per minute		3	3
Minimum scrubber liquor flow	continuous	once per		3	3

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rate		minute			
Minimum scrubber liquor pH	continuous	once per minute		3	3

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3512 MONITORING

Env-A 3512.01 Monitoring Requirements for Small, Remote HMIWI. The owner or operator of a small, remote HMIWI unit subject to Env-A 3505.01 shall:

- (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 the operation;
- (b) Install, calibrate to manufacturers’ specification, maintain, and operate a device which automatically measures and records the date, time, and weight of each charge fed into the HMIWI;
- (c) Obtain monitoring data at all times during the HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair; and
- (d) At a minimum, obtain valid monitoring data for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the HMIWI unit is combusting hospital or medical/infectious waste or any combination thereof.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3512.02 Monitoring Requirements for Small, Medium, and Large HMIWI. The owner or operator of a small, medium, or large HMIWI unit subject to Env-A 3505.02 emission limits shall:

- (a) Install, calibrate to manufacturers’ specifications, maintain, and operate devices or establish methods for monitoring the applicable maximum and minimum operating parameters in accordance with Table 3500-4 such that these devices or methods measure and record values for these operating parameters at the frequencies indicated in Table 3500-4 at all times except during periods of startup and shutdown;
- (b) Install, calibrate to manufacturers’ specifications, maintain, and operate a device or method for measuring the use of a bypass stack including date, time, and duration;
- (c) For HMIWI units using a device other than the air pollution control devices pursuant to Env-A 3511.05(b) to comply with Env-A 3505.02 emission limits, install, calibrate to manufacturers’ specifications, maintain, and operate the equipment necessary to monitor the site specific operating parameters developed pursuant to Env-A 3511.05(i);
- (d) Obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair; and
- (e) At a minimum, obtain valid monitoring data for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the designated HMIWI unit is combusting hospital waste and/or medical/infectious waste.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

PART Env-A 3513 RECORDKEEPING AND REPORTING

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Env-A 3513.01 Recordkeeping and Reporting for Small, Remote HMIWI Units. The owner or operator of each small, remote HMIWI subject to Env-A 3505.01 emission limits, shall:

(a) Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within 10 days of an inspection or an alternative time frame established by the department pursuant to Env-A 3510.03(b);

(b) Submit an annual report containing information pursuant to (a)(1), above, no later than 60 days following the year in which data were collected; and

(c) Submit subsequent semi-annual reports signed by a responsible official in accordance with the permitting requirements under Title V of the Act.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Env-A 3513.02 Recordkeeping and Reporting for Small, Medium, and Large HMIWI Units.

(a) The owner or operator of a small, medium, or large HMIWI unit shall maintain the following information, for a minimum of 5 years:

(1) Calendar date of each record;

(2) Records of the following data, as applicable:

- a. Concentrations of any pollutant listed in Env-A 3505.02(a) or measurements of opacity as determined by the continuous emission monitoring system;
- b. HMIWI charge dates, times, and weights and hourly charge rates;
- c. Fabric filter inlet temperatures during each minute of operation;
- d. Amount and type of dioxin/furan sorbent used during each hour of operation;
- e. Amount and type of mercury sorbent used during each hour of operation;
- f. Amount and type of hydrogen chloride sorbent used during each hour of operation;
- g. Secondary chamber temperatures recorded during each minute of operation;
- h. Liquor flow rate to the wet scrubber inlet during each minute of operation;
- i. Horsepower or amperage to the wet scrubber during each minute of operation;
- j. Pressure drop across the wet scrubber system during each minute of operation;
- k. Temperature at the outlet from the wet scrubber during each minute of operation;
- l. pH at the inlet to the wet scrubber during each minute of operation;
- m. Records indicating use of the bypass stack, including dates, times and durations, and
- n. For HMIWI units using an alternative air pollution control device in accordance with Env-A 3511.05(i) and Env-A 3512.02(a)(3), all operating parameter data collected;

(3) Identification of calendar days for which data on emission rates or operating parameters specified pursuant to (2), above, have not been obtained, with an identification of the emission rates or

operating parameters not measured, reasons for failure to obtain the data, and a description of corrective actions taken;

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

(5) Identification of calendar days for which data on emission rates or operating parameters pursuant to (2), above, exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective action taken;

(6) 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;

(7) Records showing the names of HMIWI operators who have completed review of the operator qualifications and requirements pursuant to Env-A 3506.01 including the date of the initial review and all subsequent annual reviews;

(8) Records showing the names of the HMIWI operators who have completed the operator training requirements pursuant to Env-A 3506.01, including documentation of training and the dates of the training;

(9) Records showing the names of the HMIWI operators who have met the criteria for qualification pursuant to Env-A 3506.02 and the dates of their qualification; and

(10) Records of calibration of any monitoring devices pursuant to Env-A 3512.02(a)(1), (2) and (3).

(b) All records specified pursuant to (a), above, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the department, pursuant to the procedures set forth in Env-A 205.

(c) The owner or operator of a HMIWI unit shall submit the following information to the department no later than 60 days following the initial performance test with all reports signed by a responsible official:

(1) The initial performance test data recorded pursuant to Env-A 3511.01(a) or 3511.02(a), as applicable;

(2) The values for the site-specific operating parameters established pursuant to Env-A 3511.05(c) or (i), as applicable; and

(3) The waste management plan developed in accordance with Env-A 3509.01.

(d) In accordance with the permitting requirements under Title V of the Act, the owner or operator of a small, medium or large HMIWI unit shall submit a semi-annual report signed by a responsible official that includes the following information:

(1) The values for the site-specific operating parameters established pursuant to Env-A 3511.05(c) or (i), as applicable;

(2) 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 Env-A 3511.05(c) or (i);

(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to Env-A 3511.05(c) or (i) for the calendar

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year preceding the year being reported in order to provide the department with a summary of the performance of the affected HMIWI unit over a 2-year period;

(4) Any information recorded pursuant to (a)(3) through (a)(5), above, for the calendar year being reported;

(5) Any information recorded pursuant to (a)(3) through (a)(5), above, for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected HMIWI unit over a 2-year period;

(6) The results of any performance tests, if any such tests were conducted during the reporting period;

(7) A statement that no exceedances occurred during the reporting period, if no exceedances or malfunctions were reported pursuant to (a)(3) through (a)(5), above, for the calendar year being reported; and

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

(e) The owner or operator of a small, medium, or large HMIWI unit shall submit semi-annual reports containing information recorded pursuant to (a)(3) through (a)(5), above, and signed by a responsible official, according to the following schedule:

(1) The initial report shall be submitted no later than 60 days following the initial reporting period;

(2) The first semiannual report shall be submitted within 6 months of submission of the information specified in (b) above; and

(3) Subsequent reports shall be submitted no later than 6 calendar months following the previous report.

Source. #6938, eff 1-30-99; amd by #7127, eff 10-30-99; ss by #8788, eff 1-5-07

PART Env-A 3514 TITLE V OPERATING PERMITS

Env-A 3514.01 Title V Operating Permits. Any facility that contains a HMIWI unit subject to the provisions of this chapter shall be subject to the permitting requirements of Env-A 609.

Source. #6938, eff 1-30-99; ss by #8788, eff 1-5-07

Appendix

Rules	Specific State or Federal Statutes Implemented
Env-A 3500 as a whole (see also specific parts listed below)	N.H. RSA 125-C:4 N.H. RSA 125-C:6 N.H. RSA 125-C:11 42 U.S.C. §7411(d) [CAA §111(d)] 42 U.S.C. §7429 [CAA §129]
Rules	Specific Federal Regulation Implemented
Env-A 3502	40 CFR 60.32e, Subpart Ce
Env-A 3503	40 CFR 60.31e, Subpart Ce
Env-A 3505	40 CFR 60.33e, Subpart Ce, Table 1 and Table 2
Env-A 3506	40 CFR 60.34e, Subpart Ce
Env-A 3509	40 CFR 60.35e, Subpart Ce
Env-A 3510	40 CFR 60.36e, Subpart Ce
Env-A 3511 and Env-A 3512	40 CFR 60.37e, Subpart Ce
Env-A 3513	40 CFR 60.38e, Subpart Ce
Env-A 3514	40 CFR 60.32e(i), Subpart Ce