

Design parameters and operating restrictions.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see the last paragraph of rule 3745-75-01 of the Administrative Code titled "Reference to materials."]

- (A) All incineration shall occur in a controlled air multi-chamber incinerator, or equivalent technology as approved by the director, which provides complete combustion of waste, excluding metallic items, to carbonized or mineralized ash. Any ash that does not meet the criteria shall be re-incinerated.
- (B) The secondary combustion chamber of any unit shall operate so that the instantaneous temperature of the gas exiting the chamber is a minimum of ninety per cent on the absolute scale of the highest three-hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the particulate matter, carbon monoxide, and dioxin/furan limits, or a minimum temperature of one thousand six hundred degrees Fahrenheit, whichever is greater.
- (C) The primary combustion chamber shall be maintained so that the exit gas has a minimum temperature of one thousand four hundred degrees Fahrenheit for continuous-duty units or one thousand two hundred degrees Fahrenheit for batch or intermittent feed units.
- (D) The secondary combustion chamber of any HMIWI shall allow for a one-second retention time at the minimum temperature specified in paragraph (B) of this rule except for any unit that has a longer retention time specified in an Ohio EPA permit to install or is constructed after January 1, 1991 which shall have a two-second retention time at the minimum temperature specified in paragraph (B) of this rule.
- (E) All medical/infectious waste incinerators with a capacity greater than four hundred pounds per hour shall be equipped with an automatic feeder which is designed and operated so that wastes cannot be charged if the gas exiting the secondary combustion chamber has not reached the minimum temperature specified in paragraph (B) of this rule.
- (F) Medical/infectious waste shall not be loaded into the primary combustion chamber of any medical/infectious waste incinerator until the gas exiting the primary chamber has reached the minimum temperature specified in paragraph (C) of this rule.
- (G) The stack or stacks from any HMIWI shall be designed to minimize the impact of the emissions on employees, residents, patients, visitors, or nearby residences. The design of any unit shall meet good engineering practices so as not to cause excessive

concentrations of any air contaminant at any air intake for heating and cooling of any building, or at operable windows, or doors.

- (H) Any mechanically-fed medical/infectious waste incinerator must be equipped with an air lock system to prevent opening the incinerator to the room environment. The volume of the loading systems shall be designed so as to prevent overcharging of the unit to assure complete combustion of waste.
- (I) Following the date on which the initial performance test is completed or is required to be completed under paragraph (B)(4) of rule 3745-75-06 of the Administrative Code, a HMIWI may not be operated above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in paragraphs (H) and (I) of rule 3745-75-04 of the Administrative Code and measured as three-hour rolling averages (calculating each hour as the average of the previous three operating hours) at any time 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 parameters.
- (J) All medical/infectious waste incinerators with a capacity greater than four hundred pounds per hour shall be equipped with an air pollution control device designed to reduce hydrogen chloride emissions and provide for continuous compliance with the hydrogen chloride emission limits when the unit is in operation.
- (K) All incinerators, including all associated equipment and grounds, shall be designed, operated and maintained to prevent the emission of objectionable odors.
- (L) Medical/infectious waste that is also radioactive shall be managed in accordance with the applicable rules of the Ohio department of health and regulations of the United States nuclear regulatory commission.

[Note: section 3734.027 of the Revised Code prohibits the disposal of low level radioactive waste in an "infectious waste treatment facility" as that term is defined in the Revised Code.]

- (M) The owner or operator of any HMIWI shall not intentionally dispose of the following items by burning in the incinerator:
 - (1) Visible globules of mercury;
 - (2) Nickel-cadmium batteries;
 - (3) Switches, thermometers, batteries, and other devices containing mercury; and

- (4) Bags or other containers for infectious waste handling which contain cadmium, chromium, or lead as a pigmenting agent.

- (N) All HMIWI units are to be operated only by properly trained and qualified personnel. A minimum of twenty-four hours of HMIWI operation training shall be provided to each operator before he/she is allowed to operate an incinerator. This may include, for each operator, the successful completion of the training course in the operation and maintenance of hospital medical waste incinerators developed by the "Control Technology Center", USEPA, or courses or instructions provided by incinerator manufacturers, professional engineering organizations, colleges or universities, corporate training programs, or Ohio EPA. A copy of all the training records for each operator shall be immediately available to the Ohio EPA and USEPA personnel upon request.

- (O) Training shall be obtained by completing a HMIWI operator training course that includes, at a minimum, the following provisions:
 - (1) Twenty-four hours of training on the following subjects:
 - (a) Environmental concerns, including pathogen destruction and types of emissions;
 - (b) Basic combustion principles, including products of combustion;
 - (c) Operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;
 - (d) Combustion controls and monitoring;
 - (e) Operation of air pollution control equipment and factors affecting performance;
 - (f) Methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures;
 - (g) Inspection and maintenance of the HMIWI, air pollution control devices and continuous emission monitoring systems;
 - (h) Actions to correct malfunctions or conditions that may lead to malfunction;
 - (i) Bottom and fly ash characteristics and handling procedures;
 - (j) Applicable federal, state, and local regulations;
 - (k) Work safety procedures;

- (l) Pre-startup inspections; and
 - (m) Recordkeeping requirements.
- (2) An examination designed and administered by the instructor.
- (3) Reference material distributed to the attendees covering the course topics.
- (P) Qualification shall be obtained by:
- (1) Completion of a training course that satisfies the criteria under paragraph (O) of this rule;
 - (2) Either six months experience as a HMIWI operator, six months experience as a direct supervisor of a HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators; and
 - (3) Review of the information contained within the operations manual required by paragraph (T) of this rule.
- (Q) Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.
- (R) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass the following training on an annual basis:
- (1) A review or refresher course of at least four 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.
 - (2) Review of the information contained within the operations manual required by paragraph (T) of this rule.
- (S) A lapsed qualification shall be renewed by one of the following methods:

- (1) For a lapse of less than three years, the HMIWI operator shall complete and pass a standard annual refresher course and review of the operations manual described in paragraph (R) of this rule.
 - (2) For a lapse of three years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (O) of this rule, and shall review the information contained within the operations manual required by paragraph (T) of this rule.
- (T) The owner or operator of an affected facility shall maintain an operations manual available to operators and to the USEPA and the director, which will include the following:
- (1) A summary of applicable regulations of the Ohio EPA division of air pollution control and the Ohio EPA division of solid and infectious waste management;
 - (2) A description of the basic combustion principles applicable to the incinerator;
 - (3) Procedures for receiving, handling, and charging waste;
 - (4) Startup, shutdown, and malfunction procedures for the incinerator and associated control equipment;
 - (5) Procedures for maintaining proper combustion air supply levels;
 - (6) Procedures for operating the incinerator and associated control equipment within the standards prescribed by this rule;
 - (7) Procedures for responding to periodic malfunction or conditions that may lead to malfunction;
 - (8) Procedures for monitoring incinerator emissions;
 - (9) Reporting and recordkeeping procedures;
 - (10) Procedures for handling ash; and
 - (11) A list of the current allowable values of all site-specific operating parameters, with the dates of the most recent performance test(s) and the actual operating conditions that served as a basis for deriving the allowable values.
- (U) Every operator qualified to operate the incinerator shall review the information contained within the operations manual required by paragraph (T) of this rule prior to assumption of duties affecting the operation of the incinerator and at least annually thereafter.

- (V) All medical/infectious waste incinerators shall be equipped with mechanical feeding arrangements which prevent exposure of personnel to any hazard which may result from charging of feed into a preheated primary chamber.

Effective: 08/24/2009

R.C. 119.032 review dates: 05/22/2009 and 08/24/2014

CERTIFIED ELECTRONICALLY
Certification

08/14/2009
Date

Promulgated Under: 119.03
Statutory Authority: 3704.03(E)
Rule Amplifies: 3704.03(A), 3704.03(E)
Prior Effective Dates: 7/9/91, 3/23/04