

401 KAR 61:013. Existing medical waste incinerators.

RELATES TO: KRS 224.20-100, 224.20-110, 224.20-120

STATUTORY AUTHORITY: KRS 224.10-100

CERTIFICATION STATEMENT:

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the Environmental and Public Protection Cabinet to prescribe administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for standards of performance for existing medical waste incinerators.

Section 1. Definitions. As used in this administrative regulation, all terms not defined in this section shall have the meaning given them in 401 KAR 50:010.

- (1) "Affected facility" means a device for which construction, modification, or reconstruction commenced before February 7, 1991, that combusts material which, if included in the waste stream, would be medical waste.
- (2) "Afterburner" means an auxiliary burner for destroying unburned or partially burned combustion gases after they have passed from the combustion chamber.
- (3) "Biologicals" means a biological product used in the prevention or treatment of disease.
- (4) "Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding household and industrial wastes. Commercial solid waste includes waste from medical facilities, schools, and other institutions that is not medical waste.
- (5) "Hazardous waste" has the meaning given it in KRS 224.01-010.
- (6) "Household solid waste" means solid waste, including garbage and trash generated by single and multiple family residences, hotels, motels, bunkhouses, ranger stations, crew quarters, and recreational areas such as picnic areas, parks, and campgrounds.
- (7) "Industrial waste" means a liquid, gaseous, or solid waste substance resulting from a process of industry, manufacture, trade, or business, or from the development, processing, or recovery of a natural resource.
- (8) "Mass burn rotary waterwall incinerator" means an incinerator that combusts waste in a cylindrical rotary waterwall furnace.
- (9) "Mass burn waterwall incinerator" means an incinerator that combusts waste in a conventional waterwall furnace.
- (10) "Medical waste" means:
 - (a) Cultures and stocks of infectious agents, including specimen cultures collected 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;
 - (b) Waste human blood and blood products such as serum, plasma, and other blood components;
 - (c) Pathological wastes, such as tissues, organs, body parts, and body fluids that are removed during surgery and autopsy;
 - (d) All discarded sharps, including but not limited to hypodermic needles, syringes, Pasteur pipettes, broken glass, scalpels, scalpel blades, glass vials, etc., used in patient care, autopsy, embalming, or which have come into contact with infectious agents during use in medical, research, or industrial laboratories;
 - (e) Carcasses and body parts of animals that were exposed to pathogens in research, in the production of biologicals, or in the in vivo testing of pharmaceuticals; and
 - (f) Other wastes as may be designated by a permit issued by the Division for Air Quality.

- (11) "Metals" means condensible metals emitted from units. For the purpose of this administrative regulation, particulate matter shall serve as a surrogate for the measurement and control of metals.
- (12) "Modular excess air incinerator" means an incinerator that combusts waste and that is not field-erected and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.
- (13) "Modular starved air incinerator" means an incinerator that combusts waste and that is not field-erected and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.
- (14) "Multiple-chamber incinerator" means an incinerator consisting of at least two (2) refractory lined combustion chambers (primary and secondary) in series, physically separated by refractory walls, and interconnected by gas passage ports or ducts.
- (15) "Municipal solid waste" or "MSW" means household solid waste and commercial solid waste.
- (16) "Organics" means organic compounds emitted from units and includes dioxins or furans. For the purpose of this administrative regulation, dioxin or furan shall serve as a surrogate for the measurement and control of organics.
- (17) "Particulate matter" means total particulate matter emitted from affected facilities.
- (18) "Plant" means one (1) or more units at the same location for which construction, modification, or reconstruction is commenced before February 7, 1991.
- (19) "Plant capacity" means the aggregate unit capacity of all units at a plant for which construction, modification, or reconstruction is commenced before February 7, 1991.
- (20) "Same location" means the same or contiguous property that is under common ownership or control, including properties that are separated only by a street, road, highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or a combination thereof, including a municipality or other governmental unit, or a quasi-governmental authority (e.g., a public utility district or waste management district).
- (21) "Uncontrolled hydrogen chloride emission rate" means the hydrogen chloride emission rate that would occur from the combustion of medical waste, or other wastes combined with medical waste.
- (22) "Uncontrolled sulfur dioxide emission rate" means the sulfur dioxide emission rate that would occur from the combustion of medical waste or other wastes combined with medical waste.
- (23) "Unit" means a device that combusts medical waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved air or excess air), boilers (i.e., steam generating units), and furnaces (whether suspension-fired, grate-fired, mass-fired, or fluidized bed-fired).
- (24) "Unit capacity" means the maximum designed charging rate of the waste for an individual unit.
- (25) "Waste" has the meaning given it in KRS 224.01-010.
- (26) "Waste management district" has the meaning given it in KRS 224.01-010.

Section 2. Applicability.

- (1) This administrative regulation shall apply to each affected facility which means each unit for which construction, modification, or reconstruction commenced before February 7, 1991. Affected facilities which combine and combust MSW, solid waste, or hazardous waste with medical waste shall be subject to this administrative regulation. Affected facilities which combust only MSW shall be subject to 401 KAR 61:011.

(2) Physical or operational changes made to an existing unit to comply with this administrative regulation shall be considered a modification or reconstruction and shall not subject an existing unit to 401 KAR 59:023.

(3) The permitting exemption for small incinerators in 401 KAR 52:040, Section 2(1)(b), shall not apply to affected facilities.

(4) Siting criteria. No owner or operator of an affected facility subject to 401 KAR 47:030 shall construct or operate the affected facility in a manner that will violate the requirements of that administrative regulation.

Section 3. Emission Standards.

(1) On and after the date on which the initial performance test is completed or required to be completed by Section 6 of this administrative regulation, no owner or operator of an affected facility with a plant capacity of 500 pounds per hour or less shall cause or allow to be discharged into the atmosphere from the affected facility:

(a) Particulate matter in excess of 229 milligrams per dry standard cubic meter (zero and one-tenth (0.1) grains per dry standard cubic foot) of exhaust gas, corrected to seven (7) percent oxygen (dry basis);

(b) Carbon monoxide in excess of 100 parts per million by volume corrected to seven (7) percent oxygen (dry basis);

(c) Visible air contaminants in excess of ten (10) percent opacity.

(2) On and after the date on which the initial performance test is completed or required to be completed by Section 6 of this administrative regulation, no owner or operator of an affected facility with a plant capacity greater than 500 pounds per hour but less than or equal to 250 tons per day, shall cause or allow to be discharged into the atmosphere from the affected facility:

(a) Particulate matter emissions in excess of 183 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) of exhaust gas, corrected to seven (7) percent oxygen (dry basis);

(b) Carbon monoxide emissions in excess of 100 parts per million by volume corrected to seven (7) percent oxygen (dry basis);

(c) Sulfur dioxide (SO₂) emissions in excess of fifteen (15) percent of the uncontrolled SO₂ emission rate (eighty-five (85) percent reduction) (by weight) on an hourly basis or thirty (30) parts per million by volume, corrected to seven (7) percent oxygen (dry basis), whichever is less stringent. Excluded from this provision are emissions from affected facilities which combust only medical waste;

(d) Visible air contaminants in excess of ten (10) percent opacity.

(3) On and after the date on which the initial performance test is completed or required to be completed by Section 6 of this administrative regulation, no owner or operator of an affected facility with a plant capacity greater than 250 tons per day shall cause or allow to be discharged into the atmosphere:

(a) Particulate matter emissions in excess of 183 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) of exhaust gas, corrected to seven (7) percent oxygen (dry basis);

(b) Carbon monoxide emissions in excess of 100 parts per million by volume corrected to seven (7) percent oxygen (dry basis);

(c) Hydrochloric acid (HCl) emissions in excess of five (5) percent of the uncontrolled HCl emission rate (ninety-five (95) percent reduction) (by weight) on an hourly basis or twenty-five (25) parts per million by volume, corrected to seven (7) percent oxygen (dry basis), whichever is less stringent;

(d) Sulfur dioxide (SO₂) emissions in excess of fifteen (15) percent of the uncontrolled SO₂ emission rate (eighty-five (85) percent reduction) (by weight) on an hourly basis

or thirty (30) parts per million by volume, corrected to seven (7) percent oxygen (dry basis), whichever is less stringent. Excluded from this provision are emissions from affected facilities which combust only medical waste;

(e) Visible air contaminants in excess of ten (10) percent opacity.

Section 4. Standards for Operating Practices.

(1) The requirements for unit operating practices listed in 401 KAR 59:023, Section 4, shall apply to all units, except as provided in subsection (2) of this section.

(2) Owners or operators of affected facilities which have an incinerator without a secondary chamber but are equipped with an afterburner operated at a temperature of 982 + (plus or minus) 93 degrees Celsius (1800 + (plus or minus) 200 degrees Fahrenheit) may choose to meet a more restrictive opacity standard of zero (0) percent in lieu of meeting the secondary chamber requirement while the affected facility is combusting medical waste. All other emission standards listed in 401 KAR 59:023, Section 3 and the operating practices listed in 401 KAR 59:023, Section 4 shall apply.

Section 5. Operator Training. The requirements for operator training listed in 401 KAR 59:023, Section 5, shall apply to all units.

Section 6. Compliance and Performance Testing. On or before the completion of the compliance timetable in Section 8 of this administrative regulation for an affected facility and at other times as may be required by the cabinet, the owner or operator of an affected facility shall conduct performance tests according to 401 KAR 50:045 and this section and shall furnish the cabinet a written report of the results of the performance tests. For standards listed in Sections 3 and 4 of this administrative regulation, the corresponding compliance and test methods listed in 401 KAR 59:023, Section 6, shall apply, except that the length of time allowed for start-ups and shutdowns shall be three (3) hours.

Section 7. Reporting and Recordkeeping Requirements. For standards listed in Section 3 and 4 of this administrative regulation, the corresponding reporting and recordkeeping requirements listed in 401 KAR 59:023, Section 7, shall apply.

Section 8. Compliance Timetable.

(1) Except as provided in subsection (2) of this section, planning, awarding of contracts, and installation of equipment capable of attaining the level of the emission standards and operating standards established in this administrative regulation shall be completed within three (3) years after February 7, 1991. Final compliance with this administrative regulation, except as provided in subsection (2) of this section, shall be demonstrated no later than December 31, 1994.

(2) Planning, awarding of contracts, and installation of equipment and procedures capable of attaining the level of materials separation specified in 401 KAR 59:021, Section 8 shall be completed by December 31, 1992. The initial demonstration of compliance with the materials separation provisions (percent reduction) specified in 401 KAR 59:021, Section 10 shall be completed by December 31, 1994. The training requirement in Section 5 of this administrative regulation shall be completed within one (1) year from February 7, 1991.

(17 Ky.R. 686; 1481; 2437; eff. 2-7-1991; TAm eff. 8-9-2007; Crt eff. 1-25-2019; TAm eff. 2-8-2019; Cert to Am 1-20-2026.)