

REGULATION 7.51 Standard of Performance for New Liquid Waste Incinerators

Air Pollution Control District of Jefferson County Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control

Pursuant To: KRS Chapter 77 Air Pollution Control

Necessity and Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of emissions from new liquid waste incinerators.

SECTION 1 Applicability

This regulation applies to those facilities disposing of waste solvents, chemicals, and other materials by incineration after the effective date of this regulation.

SECTION 2 Definitions

Terms used in this regulation not defined herein shall have the meaning given them in Regulation 1.02.

- 2.1 "Auxiliary fuel" means natural gas, propane, butane, distillate fuel oil or other fuel free of toxic compounds and containing not more than 0.5% incombustible particulate.
- 2.2 "Average gas temperature" is the mean temperature of the products of combustion while in the incinerator, averaged from the liquid waste burner temperature to the exit gas temperature, and prior to any spray chamber or air pollution control device.
- 2.3 "Combustible liquid waste" means any liquid waste with a heat content greater than 10,000 BTU/lb or capable of sustaining combustion in an incinerator without auxiliary fuel.
- 2.4 "Exit gas temperature" means the temperature of the products of combustion measured at the end of the incinerator and prior to any air pollution control device.
- 2.5 "Halogenated liquid wastes" are substances which contain any Halogen elements (bromine, chlorine, fluorine, iodine or astatine) in their chemical compositions.
- 2.6 "Liquid waste" means any material in a liquid form which has no commercial value other than recovery of its recyclable components or has been transferred to a facility for disposal.
- 2.7 "Liquid waste incinerator" is a device for incineration of liquid waste.
- 2.8 "Partially combustible liquid waste" means any liquid waste with a heat content greater than 5000 BTU/lb and less than 10,000 BTU/lb requiring auxiliary fuel for sustained combustion.
- 2.9 "Residence time" means the time required for the products of combustion to travel from the liquid waste burner to the exit of the incinerator or secondary combustion chamber while maintaining the average gas temperature associated with the residence time.

SECTION 3 Standard for Particulate Matter

No owner or operator subject to this regulation shall cause the emission of particulate matter from a liquid waste incinerator to exceed:

- 3.1 0.08 gr/dscf corrected to 7% O₂ excluding the contribution of CO₂ from auxiliary fuel, or
- 3.2 10% opacity.

SECTION 4 Standard for Volatile Organic Compounds

Any and all VOCs in a liquid waste must be destroyed to such an extent that no more than 0.01% is emitted to the atmosphere (as defined in 40 CFR Part 264 Subpart O).

SECTION 5 Standard for Toxic Air Pollutants

The provisions of Regulation 5.12 apply.

SECTION 6 Equipment Standards

- 6.1 Incineration of partially combustible liquids shall be accomplished in an incinerator equipped with means of firing sufficient auxiliary fuel to sustain combustion at temperatures as required by this regulation. No auxiliary fuel shall be required for incineration of combustible liquids unless otherwise required by the District.
- 6.2 Incineration of liquid wastes with a viscosity of 750 SSU or greater shall be accomplished in a burner equipped with steam or air atomization.
- 6.3 Incineration of halogenated liquid wastes shall be accomplished in an incinerator equipped with a wet scrubber or a device of equivalent control efficiency.
- 6.4 Incineration of liquid wastes containing inorganic salts shall be accomplished in an incinerator equipped with a particulate control device of sufficient efficiency to meet the emission standard in sections 3.1 and 3.2.
- 6.5 The incinerator shall be capable of maintaining an exit gas temperature of at least 1600 °F and a residence time of at least 1.5 seconds or such parameters as are determined by the District to provide complete combustion of the liquid waste.
- 6.6 The incinerator shall be equipped with a fail-safe device designed to interrupt the delivery of liquid waste to the burner in the event of:
 - 6.6.1 Fire or flame reaching the line delivering waste to the burner,
 - 6.6.2 Loss of burner flame,
 - 6.6.3 Venting due to malfunctions, or
 - 6.6.4 Excessive CO concentration as specified by the District after the performance test.
- 6.7 The delivery pipe to the liquid waste burner shall be equipped with a flow indicator capable of measuring the maximum demand of the burner and equipped with a continuous recorder.
- 6.8 The incinerator shall be equipped with an indicating pyrometer or thermometer to measure the exit gas temperature.

SECTION 7 Recordkeeping

The owner or operator of any liquid waste incinerator subject to this regulation shall record the following information and maintain the records for a two year period making the records available to the District upon request:

- 7.1 Daily operating hours of liquid waste incinerator;
- 7.2 Daily log of liquid waste received and specifying:
 - 7.2.1 The amount received,
 - 7.2.2 A general description of the waste,
 - 7.2.3 The source from whom the waste was received,
 - 7.2.4 A designation of whether or not the waste contains toxic materials as listed in Regulation 5.12 Appendix B, and

- 7.2.5 The quantity of waste fed as recorded per section 6.7;
- 7.3 The exit gas temperature indicator of section 6.8 shall be recorded on a continuous recorder with a total system accuracy of at least ± 25 °F;
- 7.4 The emission of carbon monoxide and oxygen in the exit exhaust gases shall be measured and recorded continuously in a manner consistent with Regulation 7.01 and 40 CFR Part 60 Appendix B;
- 7.5 Facilities that are permitted to burn 1,000 pounds per hour or more of liquid waste shall provide monitoring outputs for those parameters of sections 7.3 and 7.4 with necessary transmission facilities to feed this data directly into the District's computer upon District request and at the expense of the facilities; and
- 7.6 If a wet scrubber is to be used for acid gas emission control, then the pH of the scrubbing liquor must be maintained in the range of 6.5 to 7.5 at point of entry into the scrubber. A continuous monitoring device with recorder shall be used to maintain a record of the pH.

SECTION 8 Performance Tests

Performance tests are required of all affected facilities pursuant to the following:

- 8.1 Between 60 to 180 days after initial startup of the incinerator and at such other times as may be required by the District, the owner or operator of the incinerator shall conduct those performance tests specified by the District in accordance with Regulation 1.04 and furnish the District a written report of the results of such performance tests. These tests shall include tests for particulates, hydrogen chloride, and various metals as a minimum. Other pollutants may require testing upon notice from the District;
- 8.2 The performance tests shall be conducted under such conditions as the District shall specify to the facility operator based upon representative performance of the incinerator and the control equipment. The owner or operator shall make available to the District such records as may be necessary to determine the conditions of the performance tests;
- 8.3 The District shall be notified at least 30 days in advance of the projected starting date for any performance test; and
- 8.4 In addition, the District may require such tests as it thinks proper to determine compliance with this regulation.

Adopted v1/7-14-76; effective 6-13-79, amended v2/1-20-88.