

**RULE 418.1 Medical Waste Incinerators (Dioxin) - Adopted 7/13/92**

**I. Applicability**

Requirements of this Rule shall apply to any person owning or operating a medical waste incinerator.

**II. Definitions**

- A. CARB Test Methods: Test methods as set forth in Sections 94102 (Method 2) and 94139 (Method 428) of the California Code of Regulations.

CARB Test Method 2 means the test method as specified in Title 17, California Code of Regulations, Section 94102.

CARB Test Method 428 means the test method as specified in Title 17, California Code of Regulations, Section 94139.

- B. Dioxins: Dibenzo-p-dioxins and dibenzofurans chlorinated in the 2,3,7, and 8 positions and containing 4,5,6, or 7 chlorine atoms and expressed as 2,3,7,8, tetrachlorinated dibenzo-para-dioxin equivalents using current State Office of Environmental Health Hazard Assessment toxic equivalency factors.
- C. Facility: Any building, structure, appurtenance, installation, or improvement located on land under common ownership or operation, and on one or more contiguous or adjacent properties.
- D. Medical Facilities: Medical and dental offices, clinics and hospitals, skilled nursing facilities, research facilities, research laboratories, clinical laboratories, all unlicensed and licensed medical facilities, clinics and hospitals, surgery centers, diagnostic laboratories, and other providers of health care.
- E. Medical Waste Incinerators: Any device located at a facility and used to dispose of waste generated at a medical facility by burning.
- F. Uncontrolled Emissions: Dioxins emissions measured from an incinerator at a location downstream of the last combustion chamber, but prior to any air pollution control device.
- G. Waste: All discarded putrescible and nonputrescible solid, semisolid, and liquid materials, including garbage, trash, refuse, paper, rubbish, food, ashes, plastics, industrial wastes, demolition and construction wastes, equipment, instruments, utensils, appliances, manure, and human or animal solid and semisolid wastes.

### III. **Exemptions**

- A. This Rule shall not apply to incinerators exclusively to cremate human or domesticated pet remains.
- B. If installation of control equipment is required solely to comply with requirements of this Rule, such equipment shall not be subject to offset requirements of Rule 210.1 (New and Modified Stationary Source Review), provided the system constitutes Best Available Control Technology as defined in Rule 210.1.

### IV. **Requirements**

- A. No person shall operate any medical waste incinerator unless:
  - 1. Bottom ash, fly ash and any scrubber wastes are handled and stored in a manner preventing entrainment in the atmosphere.
  - 2. Equipment is maintained for determining and recording weight of waste charged to the incinerator.
  - 3. Each individual operating or maintaining the incinerator obtains either a certificate of training in medical waste incineration issued by the American Society of Mechanical Engineers within nine months of the commencement of the training program, or equivalent training approved by the Control Officer. Copies of training certificates for operators and maintenance persons shall be submitted to the District.
- B. For medical waste incinerators incinerating more than 10 but less than 25 tons of waste per year, an emissions test, including dioxins, shall be conducted by January 1, 1993.
- C. For medical waste incinerators incinerating more than 25 tons of waste per year:
  - 1. Uncontrolled dioxins emissions shall have been reduced before the point of emission:
    - a. By 99 percent or more, or
    - b. To 10 nanograms or less per kilogram of waste burned.
  - 2. Flue gas temperature at outlet of any control equipment shall not exceed 300 F unless it has been demonstrated to, and approved in writing by, both the California Air Resources Board (CARB) and the Control Officer that lower emissions are achieved at a higher outlet temperature; and

- a. for a single chamber incinerator, the combustion chamber shall be maintained at no less than 1600 F;
- b. for a multiple chamber incinerator, the primary combustion chamber shall be maintained at no less than 1400 F; the secondary chamber maintained at no less than 1600 F; and the residence time for combustion gas maintained at no less than one second. Residence time shall be calculated using the following formula:

$$\text{Residence Time} = \frac{V}{Q_c}$$

Where:

V = volume (ft<sup>3</sup>) from the point in incinerator where maximum temperature has been reached to point where volume flow temperature has dropped to 1600 F.

Q<sub>c</sub> = combustion gas volume flowrate through V, (ft<sup>3</sup>/sec) determined with CARB Test Method 2 and corrected for maximum combustion chamber temperature and pressure.

3. There shall be maintained a data recording system providing, for each day of operation, continuous recording of:
  - a. primary and secondary combustion chamber temperatures,
  - b. carbon monoxide emissions,
  - c. hourly waste charging rates,
  - d. opacity of stack emissions, and
  - e. critical operating parameters of air pollution control equipment.
4. Any violation, malfunction, or upset condition of incinerator, air pollution control equipment, or continuous data recording system shall be reported to the District in accordance with 111.

## V. Administrative Requirements

### A. Record Keeping

An owner or operator of a medical waste incinerator shall maintain operating records of incinerator, control equipment, monitoring equipment, and calibration records for monitoring equipment. Records shall be retained for two years and made available to District inspectors upon request.

B. Test Methods

1. Dioxin emissions shall be determined using high resolution mass spectrometry option of CARB Test Method 428.
2. Stack gas flowrate shall be determined using CARB Test Method 2.

C. Monitoring

Any person subject to Subsection IV.C. shall conduct annual testing to demonstrate compliance. The test report shall be submitted to CARB when submitted to the District and shall be conducted as follows:

1. Emissions shall be sampled:
  - a. simultaneously from flue at a location downstream of last combustion chamber, but prior to air pollution control equipment and from stack to demonstrate compliance Requirement IV.C.1.a, or
  - b. from stack to demonstrate compliance with Requirement IV.C.1.b.
2. Incinerator shall be firing at  $\pm$  10 percent of maximum design firing rate or rate allowed by District permit.
3. Feed rate and composition (moisture content, and amount of total infectious, pathological, hazardous, and/or radioactive waste) of waste charged during test shall be recorded and included in test report. This material shall conform to any conditions of approval or the Permit to Operate for the incinerator.
4. Annual testing may be discontinued when two consecutive tests demonstrate compliance with Subsection IV.C.1. Frequency of future tests shall be determined by Control Officer.

VI. Compliance Schedule

- A. Any owner or operator of a medical waste incinerator intending to permanently shut down operation for such incinerator shall notify the District of intention to shut down by December 1, 1992. Shutdown shall be no later than March 1, 1993.
- B. Any owner or operator of a medical waste incinerator incinerating 25 tons or less of waste per year intending to remain in operation shall immediately apply for a District Permit to Operate. Such facilities shall be in full compliance with requirements of this Rule by March 1, 1993.

- C. Any owner or operator of a medical waste incinerator incinerating more than 25 tons of waste per year shall submit application for an Authority to Construct equipment necessary to meet requirements of this Rule by December 1, 1992. Such facilities shall be in full compliance with the requirements of this Rule by March 1, 1993.
- D. Any owner or operator of a medical waste incinerator subject to requirements of this Rule installed or constructed on or after (date of adoption) shall be in full compliance with requirements for this Rule at initial start-up.