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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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BUREAU OF AIR QUALITY CONTROL

CHAPTER 103

FUEL BURNING EQUIPMENT PARTICULATE EMISSION STANDARD

SUMMARY: This regulation establishes a limitation on the amount of particulate matter allowed to be emitted from fuel-burning equipment. The amount of particulate matter permitted is dependent on the type of fuel being burned and whether or not the source is new or existing.

1. Scope.

This chapter shall apply to all fuel burning or solid waste fuel burning equipment located in the State of Maine and having a rated capacity of 3 million BTU per hour or greater.

2. Emission Standards.

A. Existing Sources. Any source which has applied for an air emission license prior to December 22, 1982 shall limit particulate emissions as follows:

1. Oil-Gas-Petroleum Burning.

Any source burning distillate or residual fuel oil, gas, or other petroleum product shall not exceed 0.20 lbs. particulate per million BTU. Any source which cannot achieve the 0.20 lbs. particulate per million BTU limit will be allowed to operate at that higher emission rate, but not to exceed 0.30 lbs. particulate matter per million BTU, if it installs automatic fuel viscosity controls integrated into the fuel oil controls and combustion efficiency instrumentation or equivalent alternative procedure approved by the Commissioner. The source will be allowed a period of one year from the date of demonstration of noncompliance to install the controls.

2. Coal Burning

a. Any coal burning source with a heat input capacity of less than 50 million BTU/Hr shall not exceed 0.30 lbs. particulate per million BTU.

b. Any coal burning source including one presently burning oil but

designed to burn coal with a heat input capacity of 50 million BTU/Hr. or greater shall not exceed 0.08 lbs. particulate per million BTU.

3. Wood Burning

a. Any source designed to burn wood, bark, chips, sawdust, pulp mill sludge or similar forest product (including those with supplementary oil firing capabilities) with a heat input capacity of less than 150 million BTU/Hr. shall not exceed an emission rate defined according to the following equation (even during periods of burning only oil):

$$\log y = 0.034 - 0.256 \log x$$

where y = allowable emission rate expressed
in lbs particulate per million BTU

x = equipment capacity expressed
in millions of BTU's/hour.

b. Any source designed to burn wood, bark, chips, sawdust, pulp mill sludge or similar forest product (including those with supplementary oil firing capabilities) with a heat input capacity of 150 million BTU/Hr. or greater shall not exceed 0.30 lbs. particulate per million BTU. (even during periods of burning only oil).

4. Solid Waste.

Any source burning refuse, garbage, trash or any combination of municipal or industrial solid waste shall not exceed the limits of Chapter 104, the Incinerator Particulate Emission Standard.

B. New Sources. Any fuel burning equipment which applies for an air emission license after December 22, 1982, shall limit particulate emissions as follows:

1. Oil-Gas-Petroleum Burning

a. Any source burning distillate or residual fuel oil, gas, or other petroleum product with a heat input capacity of less than 50 million BTU/Hr. shall not exceed 0.12 lbs particulate per million BTU.

b. Any source burning distillate or residual fuel oil, gas, or other petroleum product with a heat input capacity of 50 million BTU/Hr. or greater but less than 250 million BTU/Hr. shall not exceed 0.08 lbs.

particulate per million BTU.

c. Any source burning distillate or residual fuel oil, gas, or other petroleum product with a heat input capacity of greater than 250 million BTU/Hr. shall not exceed 0.06 lbs. particulate per million BTU.

2. Solid Waste Burning

a. Any source burning refuse, garbage, trash or any combination of municipal or industrial solid waste with a heat input capacity of less than 50 million BTU/Hr. shall not exceed 0.30 lbs. particulate per million BTU.

b. Any source burning refuse, garbage, trash or any combination of municipal or industrial solid waste with a heat input capacity of 50 million BTU/Hr. or greater but less than 250 million BTU/Hr. shall not exceed 0.20 lbs. particulate per million BTU.

c. Any source burning refuse, garbage, trash, or any combination of municipal or industrial solid waste with a heat input capacity of 250 million BTU/Hr. or greater shall not exceed 0.10 lbs. particulate per million BTU.

3. Coal Burning

a. Any coal burning source with a heat input capacity of less than 50 million BTU/Hr. shall not exceed 0.30 lbs. particulate per million BTU.

b. Any coal burning source with a heat input capacity equal to or greater than 50 million BTU/Hr. but less than 250 million BTU/Hr. shall not exceed 0.08 lbs. particulate per million BTU.

c. Any coal burning source with a heat input capacity of 250 million BTU/Hr. or greater shall not exceed 0.05 lbs. particulate per million BTU.

4. Wood-Coal-Biomass

a. Any biomass boiler, so called, designed to burn wood, bark, coal, sludge, petroleum product or other such combustible fuel, alone or in combination, with a heat input capacity of less than 50 million BTU/Hr. shall not exceed 0.30 lbs. particulate per million BTU.

b. Any biomass boiler, so called, designed to burn wood, bark, coal, sludge, petroleum product or other such combustible fuel, alone or in combination, with a heat input capacity of 50 million BTU/Hr. or greater

but less than 250 million BTU/Hr. shall not exceed 0.08 lbs. particulate per million BTU when burning the primary fuel or fuel combinations within the range of design rate proportions. When burning a fuel other than the primary design fuel or a combination of fuels outside the range of design rate proportions the particulate emissions shall not exceed 0.10 lbs. particulate per million BTU provided the particulate matter control equipment is being operated to maximize particulate removal.

c. Any biomass boiler, so called, designed to burn wood, bark, coal, sludge, petroleum product or other such combustible fuel, alone or in combination, with a heat input capacity of 250 million BTU/Hr. or greater shall not exceed 0.06 lbs. particulate per million BTU when burning the primary fuel, or fuel combinations within the range of design rate proportions. When burning a fuel other than the primary design fuel, or a combination of fuels outside the range of design rate proportions, the particulate emissions shall not exceed 0.10 lbs. particulate per million BTU, provided the control equipment is being operated and maintained to maximize particulate removal.

d. Any biomass boiler, so called, designed to burn wood, coal, sludge, petroleum product or other such combustible fuel, alone or in combination, with a heat input capacity of 50 million BTU/Hr. or greater which uses a venturi scrubber providing 75% or greater Sulfur Dioxide removal shall be exempt from the provisions of (b) and (c) and shall not exceed 0.10 lbs. particulate per million BTU.

NOTE: In adopting the provisions contained in this section, the Board has determined that the limitations represent Best Available Control Technology on December 22, 1982 except when more stringent limitations are required under 40 CFR Part 60, New Source Performance Standards.

3. Test Methods and Procedures.

Compliance shall be determined by test methods and procedures approved on or before December 22, 1982, or any method providing equivalent accuracy and reliability subsequently approved by the Board.

4. Exemptions.

Any source considered new according to Section 2 (B) but which equipment has been previously owned and operated shall be exempt from the provisions of Section 2(B) and will be

subject to case-by-case emission limitations not to exceed the respective emission limitations of Section 2(A).

After public hearing on August 3, 4, 10, and 11, 1982 the above regulation was adopted on December 22, 1982.

BASIS STATEMENT: The basis of the regulation is to limit the amount of particulate matter to be emitted from fuel-burning equipment thereby protecting the ambient air quality standard.

AUTHORITY: 38 M.R.S.A., Section 585, 585-A.

EFFECTIVE DATE: January 31, 1972
Amended: January 24, 1983