116th MAINE LEGISLATURE

SECOND REGULAR SESSION-1994

Legislative Document **No. 1892**

H.P. 1395 House of Representatives, February 17, 1994

An Act to Establish Reasonably Available Control Technology Standards for Nitrous Oxides.

Approved for introduction by a majority of the Legislative Council pursuant to Joint Rule 26. Reference to the Committee on Energy and Natural Resources suggested and ordered printed.

Joseph W. Mayo

JOSEPH W. MAYO, Clerk

Presented by Speaker GWADOSKY of Fairfield.

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 38 MRSA §585-E is enacted to read:

§585-E. Reasonably available control technology for nitrous oxides emissions

Compliance with the following emissions standards constitutes reasonably available control technology for nitrous oxides emissions as may be required pursuant to the Federal Clean Air Act, Section 182, 42 United States Code, Section 7511a. This section applies only to stationary sources with the potential to emit 100 tons per year or more of nitrous oxides and that are located in areas designated as nonattainment for ozone and classified as moderate, serious or severe under 40 Code of Federal Regulations, Part 81.

1. Definitions. As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

A. "BTU" means British thermal units.

B. "Large boiler" means a steam-generating unit that has a heat input of 1,500 million BTU per hour or greater.

C. "Midsize boiler" means a steam-generating unit that has a heat input of 50 million BTU per hour or greater and less than 1,500 million BTU per hour.

D. "Small boiler" means a steam-generating unit that has a heat input equal to or greater than 20 million BTU and less than 50 million BTU per hour.

2. Large boilers. Emissions standards for large boilers are as follows.

A. Nitrous oxide emissions from large boilers licensed to fire oil may not exceed 0.30 pounds per million BTU heat input beginning May 31, 1995 and 0.25 pounds per million BTU heat input beginning May 31, 1997.

B. Nitrous oxide emissions from large boilers licensed to fire multiple fuels may not exceed 0.33 pounds per million BTU heat input beginning May 31, 1995 and 0.30 pounds per million BTU heat input beginning May 31, 1997.

C. As an alternative to the limits in paragraph A, the owner or operator of a large boiler may limit emissions through fuel switching so that, beginning May 31, 1997,

nitrous oxide emissions do not exceed 0.20 pounds per million BTU heat input from May 1st to September 30th and 0.30 pounds per million BTU heat input from October 1st to April 30th.

D. Large boilers must demonstrate compliance with this subsection with a continuous emission monitoring device for nitrous oxides. Compliance with the limits is determined on a 24-hour daily block arithmetic average basis.

3. Midsize boilers. Emissions standards for midsize boilers are as follows.

A. Nitrous oxide emissions from midsize boilers licensed to fire oil may not exceed 0.40 pounds per million BTU heat input beginning May 31, 1995 and 0.30 pounds per million BTU heat input beginning May 31, 1997, unless low nitrous oxide burners in conjunction with flue gas recirculation are installed.

B. Nitrous oxide emissions from midsize boilers licensed to fire biomass may not exceed 0.33 pounds per million BTU heat input beginning May 31, 1995 and 0.30 pounds per million BTU heat input beginning May 31, 1997.

C. Nitrous oxide emissions from midsize boilers licensed to fire biomass and oil may not exceed 0.40 pounds per million BTU heat input beginning May 31, 1995 and 0.30 pounds per million BTU heat input beginning May 31, 1997.

D. Nitrous oxide emissions from midsize boilers licensed to fire biomass and coal may not exceed 0.45 pounds per million BTU heat input beginning May 31, 1995 and 0.38 pounds per million BTU heat input beginning May 31, 1997.

E. Nitrous oxide emissions from midsize boilers licensed to fire biomass and fuels other than oil and coal may not exceed 0.33 pounds per million BTU heat input beginning May 31, 1995 and 0.30 pounds per million BTU heat input beginning May 31, 1997.

F. As an alternative to the limits in paragraphs A to E, the owner or operator of a midsize boiler may limit emissions through fuel switching so that, beginning May 31, 1997, nitrous oxide emissions do not exceed 0.20 pounds per million BTU heat input from May 1st to September 30th and 0.40 pounds per million BTU heat input from October 1st to April 30th.

G. Compliance with the numerical emissions limits in this subsection is determined as follows.

(1) By May 31, 1995, midsize boilers with a heat input of greater than 250 million BTU per hour must demonstrate compliance with a continuous emissions monitoring device for nitrous oxides. By May 31, 1997, midsize boilers with a heat input of less than 250 million BTU per hour and greater than 200 million BTU per hour must demonstrate compliance with a continuous emissions monitoring device for nitrous oxides.

(2) For boilers equipped with a continuous emission monitoring device, compliance with the numerical emissions rates is determined on a 24-hour daily block arithmetic average basis. For all other midsize boilers, compliance is determined on a one-hour average on the basis of stack test results.

4. Small boilers. Small boilers must be tuned up annually according to the procedures recommended by the manufacturer.

5. Kraft recovery boilers. Emissions standards for kraft recovery boilers are as follows.

A. Nitrous oxide emissions from kraft recovery boilers may not exceed 120 parts per million corrected to 8% oxygen or 12% carbon dioxide, on a 24-hour daily block arithmetic average basis, beginning May 31, 1995.

B. Kraft recovery boilers must demonstrate compliance with a continuous emission monitoring device for nitrous oxides.

6. Lime kilns. Emissions standards for lime kilns are as follows.

A. Nitrous oxide emissions from lime kilns may not exceed 120 parts per million corrected to 10% oxygen, on a one-hour average, beginning May 31, 1995.

B. Compliance for lime kilns is determined on the basis of stack test results.

7. Refuse-derived-fuel fired municipal solid waste incinerators. Emissions standards from refuse-derived-fuel fired municipal solid waste incinerators are as follows.

A. Nitrous oxide emissions for refuse-derived-fuel fired municipal solid waste incinerators may not exceed 180 parts per million by volume, corrected to 7% oxygen, on a 24-hour daily block arithmetic average basis, beginning May 31, 1995.

B. Refuse-derived-fuel fired municipal solid waste incinerators must demonstrate compliance with a continuous emission monitoring device.

8. Mass-burn municipal waste incinerators. Emissions standards for mass-burn municipal waste incinerators are as follows.

A. Nitrous oxide emissions from mass-burn municipal waste incinerators may not exceed 200 parts per million by volume, corrected to 7% oxygen, on a 24-hour daily block arithmetic average basis, beginning May 31, 1995.

B. Mass-burn municipal waste incinerators must demonstrate compliance with a continuous emission monitoring device for nitrous oxides.

9. Miscellaneous stationary sources. Reasonably available control technology for nitrous oxide emissions from sources subject to this section and not otherwise specified in subsections 2 to 8 must be determined by the department on a case-by-case basis.

10. Alternative compliance with May 31, 1997 standards. At the request of an owner or operator of a source subject to subsection 2 or 3, the department may establish, as reasonably available control technology, emission standards or emission control practices less stringent than those that otherwise must be met by May 31, 1997 upon a demonstration by the source that it is economically or technically infeasible to achieve the standards or install the equipment specified.

11. Exemptions. The following equipment is exempt from reasonably available control technology requirements:

A. Nitrous oxide-emitting equipment that has the potential to emit less than 10 tons per year of nitrous oxide;

B. Nitrous oxide-emitting equipment that has operated at, or is limited by license condition to, no more than 30% of its annual capacity factor, as defined in 40 Code of Federal Regulations, Section 60.41b, during the year and to no more than 10% of its annual capacity factor from May 1st to September 30th;

C. Emergency standby engines operating less than 500 hours during a consecutive 12-month period; and

D. A unit for which, by January 1, 1995, an owner or operator makes an enforceable commitment to shut down, dismantle or complete a repowering project by May 15, 1999, provided that the owner or operator agrees to tune up the equipment annually between March 15th and June 15th each year beginning in 1995. Repowered equipment may be required to meet the best practical treatment as defined in this chapter for new and modified sources.

Sec. 2. Commitment by the State to adopt rules. The State commits, pursuant to the Federal Clean Air Act, Section 100(k)(4), to adopt reasonably available control technology standards for oxides of nitrogen for sources in the attainment, nonattainment-unclassified and nonattainment-marginal areas of the State no later than one year after the date the United States Environmental Protection Agency, or the EPA, approves of this commitment unless, in the interim, the EPA determines that nitrous oxide reductions from these areas would be considered excess reductions pursuant to the Federal Clean Air Act, Section 182(f).

The State commits to perform photochemical grid modeling that demonstrates the effects of nitrous oxide from the subject areas on the closest moderate nonattainment area. The New England Urban Airshed Model application currently being used by the State of Massachusetts is the photochemical grid model that must be utilized for this purpose. The State will submit the modeling and attainment demonstration by November 15, 1994 or as shortly thereafter as practicable.

The Governor shall communicate immediately to the United States Environmental Protection Agency the State's commitment and provide any additional supporting information as may be necessary for the EPA approval.

STATEMENT OF FACT

This bill establishes reasonably available control technology standards, or RACTS, for nitrous oxide emissions from major industrial sources located in moderate or more severe ozone nonattainment areas and that are required to meet RACTS pursuant to the Federal Clean Air Act, Section 182.

The State adopts a so-called "committal SIP" or state implementation plan for nitrous oxide RACTS requirements in the rest of the State. Under the terms of the "committal SIP," the State commits to do photochemical grid modeling to determine the extent to which nitrous oxide reductions in the attainment,

nonattainment-unclassified and nonattainment-marginal areas, which are the "subject areas," will be necessary to achieve attainment in the moderate-nonatttainment areas. If the modeling demonstrates that nitrous oxide reductions in the subject areas will not be necessary to achieve attainment in the moderate nonattainment areas, facilities in the subject areas will not be subject to nitrous oxide RACTS.

This document has not yet been reviewed to determine the need for cross-reference, stylistic and other technical amendments to conform existing law to current drafting standards.