STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Statement of Reasons Pursuant to 4-168b
of the Connecticut General Statutes

Hearing Report

Amendment to the Regulations of Connecticut State Agencies (RCSA) Concerning:

Control of Nitrogen Oxides Emissions - section 22a-174-22

Hearing Officer Paul E. Farrell

November 25, 1996

On October 1, 1996, the Commissioner of the Department of Environmental Protection (Department or DEP) published a notice of intent to amend section 22a-174-22 of the Regulations of Connecticut State Agencies (RCSA) concerning the control of nitrogen oxides (NOx) emissions. Pursuant to such notice, a public hearing was held on October 31, 1996. The public comment period for these proposed amendments closed on November 1, 1996.

I. Outline of this Report

Part II of this report summarizes the proposed amendments to the RCSA. Part III of this report provides section 22a-174-22 of the RCSA as described in the public notice published on October 1, 1996. Part IV of this report provides a summary of public comments either supporting or opposing the proposed regulation. Part IV includes the Department's response to such comments including any reasons for rejecting those comments in opposition to the proposed regulation. Part V includes the final wording of the proposed regulation. Part VI contains the conclusion of this report. Those who provided comments are identified in Attachment 1.

II. Summary of the Proposed Amendments

This regulation is being amended to clarify the existing regulations for the control of NOx emissions. The definitions of "emergency generator" and "emergency situation" are being amended to clarify the Department's intent. The Department is proposing to add definitions for "contract," "premise," and "utility." The Department proposes language to exempt engines that produce power under contract with a utility operating under a permit for emergency authorization from the emission limits contained within the regulation. In addition, the proposed amendment clarifies the date after which an exceedance of the daily emission thresholds would trigger loss of an exemption from the emission limitations. This change establishes the trigger date as May 31, 1995. Furthermore, testing, reporting and record keeping requirements are made more flexible by relieving sources of the burden of daily record keeping during the non-ozone season and relieving major sources of most daily record

keeping responsibilities, except those relating to the operation of emergency engines. Finally, several typographical errors are corrected.

III. The Proposed Amendments to section 22a-174-22 of the RCSA read as follow:

22a-174-22. Control of Nitrogen Oxides Emissions

(a) Definitions

For purposes of this section, the following definitions shall apply:

(1) "CONTRACT" MEANS: (A) AN AGREEMENT BETWEEN A UTILITY AND A CUSTOMER (OR OTHER PERSON) TO PROVIDE ELECTRICITY; OR (B) A CHANGE IN ANY AGREEMENT BETWEEN A UTILITY AND A CUSTOMER (OR OTHER PERSON) TO PROVIDE ELECTRICITY.

[(1)] (2) ["Emergency generator"] "EMERGENCY ENGINE" means a STATIONARY reciprocating engine or a turbine engine which is used as a means of providing mechanical or electrical power only during periods of TESTING AND scheduled maintenance or during EITHER an emergency [situation] OR IN ACCORDANCE WITH AN CONTRACT INTENDED TO ENSURE AN ADEQUATE SUPPLY OF ELECTRICITY FOR THE STATE OF CONNECTICUT DURING THE LOSS OF ELECTRICAL POWER DERIVED FROM NUCLEAR FACILITIES. The term does not include an engine for which the owner or operator OF SUCH ENGINE is party to [an] ANY OTHER agreement to sell electrical power from such engine to a utility, or receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability.

[(2)] (3) "Emergency [situation]" means [any of the following situations, resulting from] AN UNFORESEEABLE condition[s] THAT IS beyond the control of the owner or operator [of the premise at which the emergency generator is located and of the owner or operator of the utility providing primary electrical power] OF AN

EMERGENCY ENGINE AND THAT:

(A) [An] RESULTS IN AN interruption [in service] of ELECTRICAL power from the utility to the premise;

(B) [A reduction] RESULTS IN A DEVIATION in the voltage [below the specifications of the manufacturer of the equipment at the facility] OF GREATER THAN TEN PERCENT (10%) ABOVE OR BELOW THE STANDARD NOMINAL VOLTAGE SPECIFIED BY THE UTILITY UNDER REQUIREMENTS OF RCSA SECTION 16-11-114; [or]

(C) [A situation that requires] REQUIRES AN interruption of electrical power FROM THE UTILITY TO THE PREMISE [to enable] ENABLING the owner or operator [of the premise] to perform emergency repairs[.]; OR

(D) REQUIRES OPERATION OF THE EMERGENCY ENGINE TO MINIMIZE DAMAGE FROM FIRE, FLOOD, OR ANY OTHER CATASTROPHIC EVENT, NATURAL OR MAN-MADE.

[(3)] (4) "Gas" or "gaseous fuel" means natural gas, propane, or any other fuel that is in the gaseous state under standard conditions.

[(4)] (5) "gm/bk hp-hr" means grams per brake horsepower-hour.

[(5)] (6) "lb" means pound.

[(6)] (7) "MMBTU" means million BTU of heat input.

[(7)] (8) "MMBTU/hr" means million BTU of heat input per hour.

[(8)] (9) "MRC" means maximum rated capacity.

[(9)] (10) "Major stationary source of NOx" means a premise with potential emissions of NOx equal to or greater than fifty (50) tons per year in a serious nonattainment area for ozone, or twenty-five (25) tons per year in a severe nonattainment area for ozone.

[(10)] (11) "Other boiler" means a boiler that is not a cyclone

furnace, fast-response double-furnace naval boiler, or fluidized-bed combustor.

[(11)] (12) "Other oil" means a fuel that is liquid at standard conditions and is not residual oil.

[(12)] (13) "ppmvd" means parts per million by volume on a dry basis.

(14) "PREMISE" IS A PREMISE AS IT IS DEFINED IN SECTION 22a-174-1 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES.

[13)] (15) "Reciprocating engine" means a stationary internal combustion engine having a crankshaft turned by linearly reciprocating pistons.

[14)] (16) "Selective noncatalytic reduction" means emission control technology which involves the injection of a chemical reagent at high flue gas temperatures to selectively reduce NOx emissions to nitrogen and water.

[15)] (17) "Turbine engine" means a stationary internal combustion engine which continuously converts an air-fuel mixture into rotational mechanical energy through the use of moving vanes attached to a rotor.

(18) "UTILITY" MEANS ANY ELECTRIC PUBLIC SERVICE COMPANY AS DEFINED IN SECTION 16-1 OF THE GENERAL STATUTES AND ANY MUNICIPAL ELECTRIC UTILITY COMPANY AS DEFINED IN SECTION 7-233b OF THE GENERAL STATUTES.

[(16)] (19) "Waste combustor" means an incinerator as defined in subsection 22a-174-18(c) of the Regulations of Connecticut State Agencies, a resources recovery facility as defined in section 22a-207 of the Connecticut General Statutes, or a sewage sludge incinerator. The term does not include a flare or an industrial fume incinerator.

(b) Applicability

[(b)] (1) This section shall apply to the owner or operator of

any of the following sources:

(A) Any reciprocating engine which has a maximum rated capacity of three (3) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(B) Any fuel-burning equipment, other than a reciprocating engine, which has a maximum rated capacity of five (5) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(C) Any equipment which burns fuel for heating materials and which has a maximum rated capacity of five (5) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(D) Any waste combustor which has a design capacity of two thousand (2000) pounds or more of waste per hour and which is located at a premise that is a major stationary source of NOx; or

(E) Any fuel-burning equipment, waste combustor, or process source which has potential emissions of NOx in excess of the following:

(i) One hundred thirty-seven (137) pounds during any day from May 1 through September 30 of any year, for a source located in a severe nonattainment area for ozone; or

(ii) Two hundred seventy-four (274) pounds during any day from May 1 through September 30 of any year, for a source located in a serious nonattainment area for ozone.

[(b)](2) [Subsections (d)] SUBDIVISION (d)(2) through SUBSECTION (k), inclusive, of this section shall not apply to the owner or operator of a premise if the actual emissions of NOx since January 1, 1990 from such premise have not exceeded twenty-five (25) tons in any calendar year

for a premise in a severe nonattainment area for ozone, or fifty (50) tons in any calendar year for a premise in a serious nonattainment area for ozone. Notwithstanding this provision, [subsections (d)] SUBDIVISION (d)(2) through SUBSECTION (k), inclusive, of this section shall apply if AFTER MAY 31, 1995, such owner or operator exceeds emissions of NOx as follows:

(A) In any calendar year: twenty-five (25) tons for a premise located in a severe nonattainment area for ozone, or fifty (50) tons for a premise located in a serious nonattainment area for ozone; or

(B) On any day from May 1 through September 30 of any year: one hundred thirty-seven (137) pounds for a premise located in a severe nonattainment area for ozone or two hundred seventy-four (274) pounds for a premise located in a serious nonattainment area for ozone.

[(b)](3) Subsections (d) through (k) of this section shall not apply to an emergency [generator] ENGINE. In addition, the actual emissions from emergency [generators] ENGINES operating during an emergency [situation,] shall not be included in the determination of the applicability of subparagraph (b)(2)(B) of this section.

(4) THE OWNER OR OPERATOR OF AN EMERGENCY ENGINE SHALL NOT INCLUDE THE ACTUAL EMISSIONS FROM ANY SUCH ENGINE FOR PURPOSES OF DETERMINING APPLICABILITY IN ACCORDANCE WITH SUBPARAGRAPH (b)(2)(B) OF THIS SECTION PROVIDED SUCH EMISSIONS RESULT FROM OPERATION IN ACCORDANCE WITH AN CONTRACT WITH A UTILITY OPERATING PURSUANT TO A PERMIT OR ORDER WHICH:

(A) REQUIRES THE PERMITTEE TO MAINTAIN A LIST WHICH IDENTIFIES ALL SOURCES WITH WHOM THE PERMITTEE HAS A CONTRACT;

(B) REQUIRES THE PERMITTEE TO RECORD AND SUBMIT TO THE COMMISSIONER DATA ON FUEL CONSUMPTION AND HOURS OF OPERATION OF EMERGENCY ENGINES OPERATING UNDER

SUCH CONTRACT; AND

(C) REQUIRES THE PERMITTEE TO OBTAIN NOX EMISSION REDUCTIONS TO OFFSET THE NOX EMISSIONS THAT RESULT FROM THE GENERATION OF CUSTOMER-CONTRACTED ELECTRICITY.

(5) NOTWITHSTANDING SUBDIVISION (b)(3), SUBSECTIONS (d) THROUGH (k), INCLUSIVE, SHALL APPLY TO AN EMERGENCY ENGINE IF, AFTER MAY 1, 1997, IT OPERATES FOR ROUTINE, SCHEDULED TESTING OR MAINTENANCE ON ANY DAY FOR WHICH THE COMMISSIONER HAS FORECAST THAT CONDITIONS ARE CONDUCIVE TO THE FORMATION OF HIGH LEVELS OF OZONE. THE COMMISSIONER MAY EXEMPT THE OWNER OR OPERATOR OF AN EMERGENCY ENGINE FROM THIS SUBDIVISION, IF SUCH EMERGENCY ENGINE IS UNATTENDED, AND THE TESTING IS AUTOMATED AND CANNOT BE MODIFIED FROM A REMOTE LOCATION.

(c) Exemption.

This section shall not apply to mobile sources.

(d) General requirements.

[(d)](1) Prior to May 31, 1995, the owner or operator of any source subject to this section shall not cause or allow emissions of NOx from such source in excess of the emission limitation specified in Table 22-1 of this section. The owner or operator of any source which is not subject to an emission limitation in Table 22-1 of this section shall not cause or allow emissions of NOx from such source in excess of seven hundred (700) ppmvd.

TABLE 22-1

NOX EMISSION LIMITATIONS PRIOR TO MAY 31, 1995
(IN POUNDS PER MMBTU OF HEAT INPUT)

	GAS-FIRED	OIL-FIRED	COAL-FIRED
Turbine engine	0.9	0.9	NA
Cyclone furnace	0.9	0.9	0.9
Fast-response double-furnace Naval boiler	0.5	0.5	0.9
Other boiler, with MRC of 250 MMBTU/hr or more	0.9	0.3	0.9
Other boiler, with MRC less than 250 MMBTU/hr	0.2	0.3	0.9

[(d)](2) On and after May 31, 1995, the owner or operator of any source subject to this section shall:

(A) comply with all applicable emission limitations for such source in subsection (e) of this section;

(B) comply with the provisions for multi-fuel sources in subsection (f) of this section;

(C) reduce the NOx emission rate from such source by forty percent (40%), pursuant to subsection (g) of this section, in accordance with a permit issued by the Commissioner;

(D) reconstruct the source, pursuant to subsection (h) of this section, in accordance with a permit issued by the Commissioner; or

(E) modify the schedule of operations at the source,

pursuant to subsection (i) of this section, in accordance with a permit issued by the Commissioner.

[(d)](3) The owner or operator of a source subject to this section may apply in writing to the Commissioner for an extension to comply with subdivision (d)(2). The Commissioner may grant such extension for a period not to exceed one (1) year, through a permit. Such permit shall meet the Administrator's requirements for "Phase-in of Controls Beyond May 1995" ([FR.] FEDERAL REGISTER, Vol. 57, No. [266] 226, Page 55623). The Commissioner shall submit such permit or order to the Administrator for approval in accordance with the provision of 42 U.S.C. 7401-7671q.

[(d)](4) The owner or operator, in accordance with an order or permit issued by the Commissioner, may use emission reduction trading, pursuant to subsection (j) of this section, to achieve all or a portion of the reductions required by this section. The Commissioner shall submit such permit or order to the Administrator for approval in accordance with the provision of 42 U.S.C. 7401-7671q.

[(d)](5) Nothing herein shall preclude the Commissioner from issuing an order to an owner or operator to comply with the requirements of this subsection.

(e) Emission limitations.

[(e)](1) The owner or operator of a stationary source subject to this section may, in accordance with subparagraph (d)(2)(A) of this section, comply with the requirements of this section by meeting applicable emission limitations specified in Table 22-2 of this section. Emission limitations in Table 22-2 for turbine engines that are quantified in units of ppmvd shall be corrected to fifteen percent (15%) oxygen. For any source for which there is no applicable emission limitation in Table 22-2, the owner or operator of such source shall not cause or allow emissions of NOx therefrom in excess of the following:

(A) For fuel-burning equipment fired by a fuel other than those fuels cited in Table 22-2: 0.3 pounds per [million BTU of heat input] MMBTU;

(B) For any waste combustor subject to the requirements of subdivision (e)(2): 0.38 pounds per [million BTU of heat input] MMBTU[.];

(C) For any waste combustor not subject to the requirements of subparagraph (e)(1)(B) which has a waterwall furnace: 0.38 pounds per [million BTU of heat input] MMBTU[.];

(D) For any other waste combustor: 0.33 pounds per [million BTU of heat input] MMBTU[.];

(E) For a glass melting furnace: 5.5 pounds of NOx per ton of glass produced;

(F) For a source, other than a glass melting furnace, which burns fuel for heating materials: 180 ppmvd, corrected to twelve percent (12%) carbon dioxide; or

(G) For any source not having an emission limitation in subparagraphs (e)(1)(A) through (e)(1)(F) of this section: seven hundred (700) ppmvd.

[(e)](2) In addition to complying with the emission limitation in subparagraph (e)(1)(B), by May 31, 1995 the owner or operator of any waste combustor which combusts refuse derived fuel shall install and operate selective noncatalytic reduction or other NOx emissions control technology capable of reducing the NOx emission rate by at least thirty percent (30%) from the average emission rate in calendar year 1990 on one boiler unit at such facility. If the Commissioner determines that operations during 1990 were not representative of normal operations of the facility, the Commissioner may use another calendar period which is more representative. In addition, actual annual average NOx emissions from other boiler units at such facility shall each not exceed 420 tons per year. The Commissioner may consider, in the

same manner as for other sources, any emission reduction below 0.38 pounds per [million BTU of heat input] MMBTU to be eligible as surplus emissions reductions for purposes of emission reduction credits pursuant to subsection (j) of this section until May 31, 1999.

TABLE 22-2
NOX EMISSION LIMITATION ON AND AFTER MAY 31, 1995

	GAS-FIRED	RESIDUAL-OIL-FIRED	OTHER OIL-FIRED	COAL-FIRED
Turbine engine, with 100 MMBTU/hr or greater MRC	55 ppmvd	not applicable	75 ppmvd	not applicable
Turbine engine, with MRC less than 100 MMBTU/hr	0.90 lb/MMBTU	not applicable	0.90 lb/MMBTU	not applicable
Cyclone furnace	0.43 lb/MMBTU	0.43 lb/MMBTU	0.43 lb/MMBTU	0.43 lb/MMBTU
Fast-response double-furnace Naval boiler	0.20 lb/MMBTU	0.30 lb/MMBTU	0.30 lb/MMBTU	0.30 lb/MMBTU
Fluidized bed combustor	not applicable	not applicable	not applicable	0.29 lb/MMBTU
Other boiler	0.20 lb/MMBTU	0.25 lb/MMBTU	0.20 lb/MMBTU	0.38 lb/MMBTU
Reciprocating engine	2.5 gm/bk hp-hr	not applicable	8 gm/bk hp-hr	not applicable

(f) Multi-fuel sources.

[(f)](1) When, PURSUANT TO SUBPARAGRAPH (d)(2)(B) OF THIS SECTION, the owner or operator of a source switches the use of fuel, converts to a new fuel, or is capable of burning two or more different fuels, such owner or operator shall comply with the requirements of this

subsection.

[(f)](2) The owner or operator of a source that is capable of firing two or more fuels shall not cause or allow emissions of NOx from such source, in excess of the following:

(A) For fuel-burning equipment that simultaneously fires two or more different fuels: an emission limitation calculated by 1) multiplying the heat input of each fuel combusted by the emission limitation established in this section for such fuel, 2) summing those products, and 3) dividing the sum by the total heat input; or

(B) For fuel-burning equipment that is capable of interchangeably firing two or more fuels: the emission limitation in Table 22-2 for the particular equipment and fuel used. Notwithstanding this requirement, the owner or operator of a source that operates exclusively on other oil or gas from May 1 through September 30 of any year and on another fuel during the remainder of the year shall not cause or allow emissions of NOx from such source in excess of 0.2 pounds per [million BTU of heat input] MMBTU from May 1 through September 30 and 0.29 pounds per [million BTU of heat input] MMBTU for the remainder of the year.

[(f)](3) The owner or operator of a source which, on or after January 1, 1990, converts the fuel used at such source, shall not cause or allow emissions of NOx from such source in excess of the following:

(A) 0.29 pounds per [million BTU of heat input] MMBTU, when the source burned coal to provide more than fifty percent (50%) of its total heat input during the last full calendar year immediately prior to such conversion; or

(B) 0.225 pounds per [million BTU of heat input] MMBTU, if the source burned residual oil to

provide more than fifty percent (50%) of its total heat input during the last full calendar year immediately prior to such conversion.

(g) Forty percent (40%) reduction.

[(g)](1) When the owner or operator of any source reduces the NOx emission rate from such source by forty percent (40%), as provided in subparagraph (d)(2)(C) of this section, such owner or operator shall comply with the emission limitations of this section established in a permit issued by the Commissioner. Such permit shall specify such source's NOx emission limitation to be the more restrictive of:

(A) sixty percent (60%) of such source's emission rate at maximum capacity during calendar year 1990; or

(B) sixty percent (60%) of [such source's] THE emission limitation [in Table 22-1 of subdivision (d)(1)] APPLICABLE TO THE SOURCE ON JANUARY 1, 1990.

Such permit shall express the NOx emission limitation in the same units of measurement as the NOx emission limitation that would otherwise apply to such source in subsection (e).

[(g)](2) To determine the actual emission rate specified in subparagraph (g)(1)(A) of this subsection, such owner or operator shall conduct an emission test at such source under operating conditions representative of those conditions in existence at the source in calendar year 1990, at the maximum capacity at which the source was operated during such calendar year.

[(g)](3) If the Commissioner determines that operations during calendar year 1990 were not representative of normal operations from such source, the Commissioner may use another calendar year which is more representative.

(h) Reconstruction or replacement.

[(h)](1) If the owner or operator of a source proves, to the satisfaction of the Commissioner, that compliance with subsections (e) or (g) of this section is not technologically or economically feasible at such source, the Commissioner may allow the owner or operator, through a permit, to comply with this section by reconstructing the existing source, or replacing the existing source with a new source. Such reconstruction or replacement shall be completed no later than May 31, 1999.

[(h)](2) Such permit shall require that, prior to the completion of reconstruction or replacement of such source, the NOx emission rate from the existing source not exceed the more restrictive of:

(A) the emission limitation [in subdivision (d)(1)] APPLICABLE TO THE SOURCE ON JANUARY 1, 1990; or

(B) the emission limitation of any current permit or order issued by the Commissioner for such source.

[(h)](3) Such permit shall require the owner or operator, by May 31, 1995, to deposit into an escrow account an amount equal to $1,000 multiplied by the number of pounds per day of NOx emission reductions that would be needed by the existing source to achieve compliance with the emission limitations in subsection (e) of this section. The terms of such escrow account and escrow agent required by such permit shall be subject to the approval of the Commissioner. The Commissioner may require that such escrow account be established and properly insured against default at an institution authorized to operate in Connecticut by the State's Commissioner of Banking. In determining the acceptability of an escrow agent, the Commissioner shall consider the reliability and trustworthiness of the person acting as the escrow agent. The Commissioner shall also consider the escrow agent's ability to insure that any money deposited into such escrow account will be withdrawn upon written

notification in accordance with such permit.

[(h)](4) After completion of such reconstruction or replacement, the owner or operator may, upon written notification by the Commissioner, withdraw funds from the escrow account in accordance with such permit described in subdivision (h)(3). If the owner or operator fails to complete reconstruction or replacement by the date set forth in the permit, such owner or operator shall use such funds to acquire emission reduction credits upon written notice from the Commissioner.

(i) Schedule modification.

[(i)](1) If the owner or operator of a source proves to the satisfaction of the Commissioner that it is not technologically or economically feasible for such source to comply with the emission limitations in subsections (e) through (g) of this section, the Commissioner may by permit require NOx emission reductions through modifications of the schedule of NOx-emitting activities and implementation of other measures to reduce NOx emissions at such source. Such permit may include restrictions on operations on any day for which the Commissioner has forecast that [ozone levels will be "moderate to unhealthful," "unhealthful," or "very unhealthful."] CONDITIONS WILL BE CONDUCIVE TO THE FORMATION OF HIGH LEVELS OF OZONE.

[(i)](2) This subsection shall only apply to the following:

(A) Oil-fired turbine engines or [Fast-response] FAST-RESPONSE double-furnace Naval boilers that generate power to create simulated high-altitude atmospheres for the testing of aircraft engines; or

(B) Testing of fuel-burning equipment undergoing research and development.

(j) Emissions reduction trading.

[(j)](1) When the owner or operator of a source uses emission reduction trading to comply with this section, such owner or operator shall achieve reductions in NOx emissions which, at a minimum, are equivalent to those emission reductions that would be achieved by complying with all applicable emission limitations in subsection (e) of this section. The Commissioner may allow the use of emission reduction trading through the issuance of a permit. Such permit shall require the owner or operator, by May 31, 1995, to perform emission trading or to deposit into an escrow account an amount equal to $2000 multiplied by the number of pounds per day of NOx emission reductions needed to achieve compliance with the emission limitations in subsection (e) of this section. Such order or permit also shall require the owner or operator to withdraw and use such funds to acquire ERCs upon written notice from the Commissioner. The terms of such escrow account and escrow agent required by such permit shall be subject to the approval of the Commissioner. The Commissioner shall require that such escrow account be established and properly insured against default at an institution authorized to operate in Connecticut by the State's Commissioner of Banking. In determining the acceptability of an escrow agent, the Commissioner shall consider the reliability and trustworthiness of the person acting as the escrow agent. The Commissioner shall also consider the escrow agent's ability to insure that any money deposited into such escrow account will be withdrawn upon written notification in accordance with such permit.

[(j)](2) In order to comply with subdivision (j)(1) of this subsection, such owner or operator shall conduct an emission test or submit another method acceptable to the Commissioner to estimate the NOx emission limitation shortfall. Such emission test shall be conducted under operating conditions which demonstrate the maximum emission rate of such source. Such emission test shall be certified pursuant to subsection (k) of this section.

[(j)](3) Any creation or use of ERCs for the purpose of this subsection shall be consistent with the provisions of the U.S. Environmental Protection Agency's ["Economic Incentive Program Rules; Proposed Rules," published February 23, 1993 (Federal Register, Volume 58, Number 34), and the U.S. Environmental Protection Agency's] "Emissions Trading Policy Statement," published December 4, 1986 (Federal Register, Volume 51, Number 233) AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S "ECONOMIC INCENTIVE PROGRAM RULES: FINAL RULES AND GUIDANCE," PUBLISHED APRIL 7, 1994 (FEDERAL REGISTER, VOLUME 59, NUMBER 67).

(k) Emissions testing and monitoring.

[(k)](1) The owner or operator of any source subject to an emission limitation under this section shall conduct an emission test to demonstrate compliance with this section no later than May 31, 1995. Any such owner or operator which does not install or operate a continuous emissions monitor at such source shall also conduct emission tests at least once every five years. Compliance with the emission limitations of this section shall be determined based on the average of three (3) one-hour tests, each performed over a consecutive 60-minute period and performed in accordance with Section 22a-174-5. Any analysis of nitrogen content conducted as part of such emission testing shall be in accordance with Method D-3228 of the American Society for the Testing of Materials.

[(k)](2) The owner or operator shall demonstrate compliance with emission limitations of this section using sampling and analytical procedures approved under 40 CFR Part 60, Appendix A, or under procedures in subsection 22a-174-5(d). Sampling shall be conducted when the source is at normal operating temperature and, UNLESS ALLOWED OTHERWISE BY THE COMMISSIONER IN A PERMIT OR ORDER, is operating at or above ninety percent (90%) of maximum rated capacity for a fuel-burning source or at or above ninety percent (90%) of design capacity for a waste combustor. Notwithstanding such requirement, any source which has operated in excess of one hundred

percent (100%) of its maximum rated capacity at any time since January 1, 1990 shall be tested when the source is operating at or above ninety percent (90%) of its highest operating rate since January 1, 1990.

[(k)](3) On and after May 31, 1995, the owner or operator of any source that emitted more than one hundred (100) tons of NOx from a single stack during any calendar year beginning January 1, 1990, shall install, calibrate, maintain, operate, and certify a continuous emissions monitor for NOx for each such stack. The owner or operator shall notify the Commissioner in writing at least thirty (30) days prior to conducting any performance or quality assurance testing of any such monitor. Any such testing shall be conducted in accordance with a testing protocol approved by the Commissioner. Any continuous emission monitor for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in 40 CFR 60, Subpart A, Appendix B and Appendix F.

[(k)](4) Unless otherwise specified by the Commissioner in a permit or order, the averaging times for the emission limitations in this section for a source that has, or is required to have, a continuous emissions monitor for NOx shall be twenty-four (24) hours, measured from midnight at the beginning of any day to midnight of the end of that day and shall include all periods of operation, including startup, shutdown, and malfunction.

[(k)](5) The owner or operator of a source subject to this subsection may apply in writing to the Commissioner for an extension to comply with this subsection. The Commissioner may grant such extension for a period not to exceed one (1) year through a permit or order.

(l) Reporting and record keeping.

[(l)](1) The owner or operator of any source subject to this section, shall keep the following records:

(A) [Daily] FOR AN EMERGENCY ENGINE, DAILY records of [the] operating hours of such [source] ENGINE, IDENTIFYING THE OPERATING HOURS OF EMERGENCY AND NON-EMERGENCY USE;

(B) [Daily] FOR ANY PREMISE FOR WHICH SUBDIVISION (b)(2) OR (b)(3) OF THIS SECTION APPLY, records [of fuel use and NOx emissions from such source(in pounds per day)] (E.G. FUEL USE, CONTINUOUS EMISSIONS MONITORING, OPERATING HOURS) TO DETERMINE WHETHER THE NOX EMISSIONS FROM SUCH PREMISE ON ANY DAY FROM MAY 1 THROUGH SEPTEMBER 30, INCLUSIVE, ARE IN EXCESS OF ONE HUNDRED THIRTY-SEVEN (137) POUNDS FOR A PREMISE LOCATED IN A SEVERE NONATTAINMENT AREA FOR OZONE OR TWO HUNDRED SEVENTY-FOUR (274) POUNDS FOR A PREMISE LOCATED IN A SERIOUS NONATTAINMENT AREA FOR OZONE.

(C) Monthly and annual records of NOx emissions from such source(in tons);

(D) Records of all tune-ups, repairs, replacement of parts and other maintenance [of such source];

(E) Copies of all documents submitted to the Commissioner pursuant to this section;

(F) For any source required to install, calibrate, and operate a continuous emissions monitor for NOx under subdivision (k)(3), all charts, electronically stored data, and printed records produced by such continuous emissions monitor;

(G) Procedures for calculating NOx emission rates in (B) and (C) above;

(H) Records of the dates, times, and places of all emission testing required by this section, the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing;

(I) For any source required to install, calibrate, and operate a continuous emissions monitor for NOx under subdivision (k)(3), records of all performance evaluations, calibration checks and adjustments on such monitor; a record of maintenance procedures; and all data necessary to complete the quarterly reports required under subdivision (1)(4) of this section; and

(J) Any other records or reports required by an order or permit issued by the Commissioner pursuant to this section.

[(1)](2) Within thirty (30) days of the completion of emission tests conducted under the requirements of subdivision (k)(1) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner.

[(1)](3) Within sixty (60) days of the completion of certification tests conducted under the requirements of subdivision (k)(3) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner.

[(1)](4) The owner or operator of any source required to be equipped with a continuous emissions monitor for NOx under subdivision (k)(3) of this section shall submit to the Commissioner written quarterly reports of excess emissions and CEM malfunctions. Such reports shall be submitted to the Commissioner on or before January 30, April 30, July 30, and October 30 and shall include data for the three calendar month period ending the month before the due date of the report. For each period of excess emissions, such report shall include the date and time of commencement and completion of such period, the magnitude and suspected cause of the excess emissions and all actions taken to correct the excess emissions. For each malfunction of the CEM system, such report shall include the date and time of when the malfunction commenced and ended, and all actions taken to correct the malfunction.

[(l)](5) The owner or operator of any source subject to this section shall retain all records and reports produced pursuant to the requirements of this section for five (5) years. Such records and reports shall be available for inspection at reasonable hours by the Commissioner or the Administrator. Such records and reports shall be retained at the source, unless the Commissioner approves in writing the use of another location in the State.

[(l)](6) On or before April 15 of each year, the owner or operator of any source subject to this section shall submit a report on NOx emissions from such source, on a form provided by the Commissioner.

[(l)](7) The Commissioner may use data recorded by continuous emissions monitors for NOx and any other records and reports to determine compliance with applicable requirements of this section.

(m) Compliance plans.

[(m)](1) The owner or operator of any source that is subject to this section shall submit a compliance plan to the Commissioner by September 1, 1994, on forms provided by the Commissioner. Such compliance plan shall document how the source will comply with all applicable requirements of this section. The owner or operator of any source which becomes subject to this section after May 1, 1994, shall submit a compliance plan within four (4) months of the date on which the source becomes subject to this section.

[(m)](2) Any compliance plan submitted pursuant to this subsection shall include a certification signed by a responsible corporate officer or a duly authorized representative of such officer, as those terms are defined in subdivision 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual delegated by such officer with the responsibility of actually preparing the compliance plan. Such certification shall read as follows: "I

have personally examined and am familiar with the information submitted in this compliance plan and all attachments. Based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, I certify that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in this compliance plan or its attachments may be punishable as a criminal offense."

[(m)] (3) If a compliance plan does not contain all measures necessary to comply with all requirements of this section, the Commissioner may notify the owner or operator of such source of the deficiency. Such owner or operator shall resubmit a revised compliance plan within thirty (30) days of receipt of such notice.

Purpose: to make technical changes and clarifications to existing regulations for the control of emissions of nitrogen oxides.

IV. Summary of Comments Supporting or Opposing the Proposed Regulation and the Department's Response thereto

Comments from the U.S. Environmental Protection Agency (EPA)

Comment:

1. RCSA section 22a-174-22(b)(4) - EPA notes this proposed rule allows the owner/operator of an emergency engine to exempt actual emissions of NOx from calculations to determine applicability of reasonably available control technology (RACT) requirements if the owner/operator is under a contract (as that term is defined in the rule) with a utility which is under a permit or order. EPA, noting that such permit or order must contain requirements for the utility to record data on fuel consumption and hours of operation, questions a utility's legal and/or physical ability to access the subject engine to ascertain its compliance status. EPA recommends changing the requirement to apply to the owner of the emergency engine, rather than the permittee (i.e., the utility).

Alternatively, EPA recommends the requirement could be changed from "record and submit" the data on fuel consumption and hours of operation to simply "submit..." EPA notes, however, this may still lead to situations where the utility is unable to comply with the provisions in section 22a-174-22 of the RCSA.

Response:

RCSA section 22a-174-22(b)(4) is intended to exempt actual NOx emissions from the NOx RACT applicability determination if the emissions source is an emergency engine operating under a contract with a utility under permit or order for the production of electricity during an emergency, as that term is defined in the proposed rule. The DEP should revise subparagraph (B) to indicate that either the utility/permittee or the owner/operator of the emergency engine must record and submit the required data to the Commissioner. This revision will leave the question of **who** must provide the required data to the various private parties to settle through independent negotiation. DEP should only be concerned that the required information be submitted in a timely fashion, regardless of who submits such information. Therefore, I recommend RCSA section 22a-174-22(b)(4)(B) be revised to read as follows:

> requires either the permittee or the owner or operator of the emergency engine to record and submit to the commissioner data on fuel consumption and hours of operation of emergency engines operating under such contract; and

Comment:

2. RCSA section 22a-174-22(*l*)(1) - EPA notes the Department's proposal eliminates the explicit requirement for daily record keeping of fuel use and NOx emissions at sources subject to NOx RACT. EPA believes this information is important (1) for determining whether an emissions unit exceeds daily applicability limits; (2) for calculating typical summer day emissions for inventory and air quality planning purposes; and (3) for sources which operate sporadically, such as peaking units. EPA recommends clarifying these provisions to allow the Department to require such daily information as may be necessary for other purposes.

RCSA section 22a-174-22(*l*)(1)(A) - EPA recommends the Department add the language, "or other records as needed for meeting other parts of this section" to the end of this subparagraph. EPA believes this would allow the Department to collect information from the owners of emergency engines regarding emissions related parameters, such as daily fuel use, CEMS data, etc., during emergency and nonemergency operation of such engines. EPA believes such information appears to be necessary in order to fulfill the requirements of RCSA section 22a-174-22(b)(4)(B) and for the permittee as discussed in their comment to RCSA section 22a-174-22(b)(4), above.

Response:

In response to EPA's first concern, RCSA section 22a-174-22(*l*)(1)(A) and (B) requires the owner or operator of a source keep daily records of emissions in order to limit applicability of this section. In response to EPA's second concern, monthly records are adequate to calculate "typical summer day emissions." However, if EPA were to require tracking of highest summer day emissions, then it would be necessary to track daily emissions. In response to EPA's third

concern, there is currently no federal requirement for a source to maintain daily records for sporadically operated sources such as peaking units. However, the Department does have the authority to collect such information (see RCSA section 22a-174-22(*l*)(1)(J) requiring the owner or operator of a source subject to this section to keep. . . "any other records or reports required by an order or permit issued by the Commissioner. . .") should this become necessary under any future requirement such as the Compliance Assurance Monitoring (CAM) rule now under development by EPA. Therefore, I recommend the suggested language not be adopted into the proposed regulation.

Comments from the South Central Connecticut Regional Water Supply (RWA)

Comment:

1. In general the RWA welcomes the proposed revisions and believes they will clarify existing language and eliminate certain record keeping requirements. RWA is concerned as to the means DEP will employ to communicate high ozone forecasts to the regulated community for purposes of RCSA section 22a-174-22(b)(5) - which requires compliance with the entire NOx RACT rule should an emergency engine operate during a day when high ozone levels are forecast. RWA believes the permanent loss of emergency engine related exemptions is a severe penalty for operating for possibly a short duration on a day with high ozone levels. RWA recommends revising the proposed language to establish alternative methods to address minor violations other than applying the full NOx RACT rule to owners/operators of emergency engines.

Response:

I recommend RCSA section 22a-174-22(b)(5) be revised to delete reference to the phrase "forecast that conditions are conducive to the formation of high levels of ozone" and that such phrase be replaced with the standard contained in section 22a-174-22(i)(1), Schedule modification. The language contained in the "schedule modification" subsection precludes operation on days on which the Commissioner has forecasted ozone levels to be "moderate to unhealthful," "unhealthful," or "very unhealthful." These standards are tied to numeric values within the pollutant standard index (PSI). A telephone recording of the PSI is available each afternoon during the ozone season at approximately 3:00 PM, five days per week, and may be reached at (860) 424-4167. Predictions for the weekend are included on the Friday recording. This system is currently used to provide information to those sources subject to the schedule modification provisions of this rule and should perform the same function for sources operating under contract with utilities.

Section 22a-174-22(b)(5), as proposed for public hearing, also provides the Commissioner the authority to exempt the owner or operator of an emergency engine from the provisions of this subdivision if such engine is unattended, the testing is automated and cannot be modified from a remote location. I recommend the form of such exemption be clarified as being either by permit

or order.

Comment:

2. RWA recommends revising the proposed language in RCSA section 22a-174-22(*l*)(1)(C) to be consistent with language in RCSA section 22a-174-22(*l*)(1)(B). RWA provides the following language for inclusion into subparagraph (C) of subdivision (*l*)(1):

> records (e.g. fuel use, continuous emissions monitoring, operating hours) to determine whether nox emissions from such premise in any calendar year are in excess of twenty-five (25) tons for a premise located in a severe nonattainment area for ozone or fifty (50) tons for a premise located in a serious nonattainment area for ozone.

Response:

I recommend RCSA section 22a-174-22(*l*)(1)(C) be revised to include the language provided by the RWA.

Comments from Northeast Utilities Service Company/Connecticut Light and Power Company

Comment:

1. The Connecticut Light and Power Company (CL&P) is pursuing various measures to ensure a sufficient supply of electrical power for the state of Connecticut while the nuclear power plants are out-of-service. CL&P supports the proposed NOx regulation because it provides their customers with protection from additional regulation based on emissions from customer emergency engines operating during a period of electrical shortage and in accordance with a contract between the customer and utility. CL&P requests the Department of Environmental Protection take all necessary steps to promulgate this proposed regulation without delay so that utility customers/emergency engine operators have sufficient regulatory protection with respect to utility contracts entered into to assure adequate energy supply for the 1996-97 winter heating season. CL&P also requests the definition of "emergency engine" be clarified by adding the word "otherwise" before the word "received" in line 11 of this definition so as not to preclude a utility from offering an advantageous utility rate as consideration in return for a customer entering into a contract to assure an adequate supply of electricity to Connecticut, as described earlier in this definition.

Response:

The Department should take all appropriate steps to promulgate a regulation which will support the efforts of the utility industry to assure an adequate supply of electricity to the state of

Connecticut during the 1996-97 heating season, but ultimate authority to approve an amendment to the Regulations of Connecticut State Agencies rests with the Legislative Regulations Review Committee of the Connecticut General Assembly. With respect to CL&P's second comment, the definition of "emergency engine" should be revised to include the word "otherwise" before the word "received" in line 11.

Comments from Sci-Tech, Inc., Engineering and Environmental Services (Sci-Tech)

Comment:

1. RCSA section 22a-174-22(b)(5) - Sci-Tech questions how the Commissioner of Environmental Protection will determine high ozone days in accordance with RCSA section 22a-174-22(b)(5);

Response:

Please see response to RWA comment #1.

Comment:

2. Sci-Tech questions how revisions to the "Compilation of Air Pollutant Emission Factors (AP-42)" published by the U.S. Environmental Protection Agency will effect applicability determinations for purposes of the NOx regulation after May 1, 1994.

Response:

This commentor raises an interesting, although hypothetical, issue with respect to the effect an EPA revision to an AP-42 emission factor might have on the applicability of this regulation to a source. Since the commentor does not refer to a specific revision to AP-42, the Department may address this issue at a later date.

Comment:

3. If due to the addition of new equipment or the development of new emission factors which result in NOx emissions from a premise which exceed major source thresholds after May 31, 1995, what are the time frames by which an owner or operator must comply with the various requirements of this rule?

Response:

The NOx rule currently requires that any source subject to its provisions meet the emission standards contained in RCSA section 22a-174-22(d), (e) and Table 22-2 after May 31, 1995. In addition, RCSA section 22a-174-22(m)(1) requires the owner or operator of a source which

becomes subject to this section after May 1, 1994, must submit a compliance plan within four (4) months of the date on which the source becomes subject to this section. An order or permit would be drafted based on the compliance plan setting forth the time frames for compliance testing.

Comments from the Aetna Life Insurance Company Safety & Environmental Unit (Aetna#1)

In addition to expressing overall support for the proposed amendments to the NOx rule, Aetna#1 offers three comments on RCSA section 22a-174-22(b)(5):

Comment:

1. RCSA section 22a-174-22(b)(5) proposes to exempt routine, scheduled emergency engine testing or maintenance from various requirements unless such testing is performed "on any day for which the Commissioner has forecast that conditions are conducive to the formation of high levels of ozone." This language does not provide:

- a mechanism for relaying ozone forecasts to the public;
- an advance notice period within which the forecast must be delivered prior to its applicability; or
- a definition of "high levels of ozone" (Aetna suggests using the national primary ambient air quality standard).

Aetna#1 requests the final proposed amendment require the Commissioner to provide ozone forecasts to the public through local media (print and broadcast) at least 24 hours in advance of their applicability.

Response:

Please see response to RWA comment #1.

Comment:

2. Aetna#1 requests the final proposed amendment provide loss of emergency engine status only if the owner or operator of an emergency engine exceeds an emissions threshold (137 or 274 lbs. NOx/day) **and** operates on a high ozone day as may be designated by the Commissioner.

Response:

One of the purposes of RCSA section 22a-174-22(b)(5) is to deter any operation of emergency engines during days when ozone levels are predicted to reach unhealthful levels. Granting Aetna's request to remove emergency engine status only if the daily emission limit is exceeded

on a high ozone day is contrary to the intent of this regulation to preclude any voluntary non-emergency operation of these sources. Therefore, I recommend this request not be incorporated into the proposed regulation.

Comment:

3. Aetna#1 requests DEP clarify that the prohibition of operation on days forecasted to be conducive to the formation of high levels of ozone is limited to days during the defined ozone season (May 1 through September 30, inclusive).

Response:

For a response to comments on RCSA section 22a-174-22(b)(5) - please see response to RWA comment #1 concerning the use of the PSI as an indicator of ozone levels. The Commissioner provides the PSI only during the ozone season (May 1 through September 30, inclusive), so there is no need to define the ozone season in the rule.

Comments from the Aetna Life Insurance Company Aetna Business Resources (Aetna #2)

Comment:

1. RCSA section 22a-174-22(a)(2) - Aetna#2 comments that the definition of "emergency engine" is too narrowly drawn. This commentor notes that loss of nuclear source derived electricity is not the only reason the state may experience an inadequate power supply. This commentor believes there are other reasonable grounds for the operation of emergency engines in accordance with customer contracts. This commentor requests the DEP add the following text at the end of the first sentence of RCSA section 22a-174-22(a)(2): ". . . or in accordance with a contract intended to ensure an adequate supply of electricity for the State of Connecticut during periods of time when an electric public service company or municipal electric utility forecasts or experiences conditions that are conducive to an electrical power shortage."

Response:

I recommend the offered language not be adopted for the following two reasons. First, loss of nuclear derived electrical power is a known risk factor which could present the State of Connecticut with a prolonged emergency situation. Governor Rowland recognized this fact when he authorized the issuance of emergency regulations for the 1996 ozone season. Second, other interruptions of electrical service from various man-made or natural causes (i.e., storms) do not constitute a readily ascertainable risk factor and should, therefore, not provide the basis for waiver of air pollution control requirements.

Comment:

2. RCSA section 22a-174-22(a)(3)(B) - Aetna#2 comments that the definition of "emergency" as currently drafted might not encompass situations which could be detrimental to equipment used in Aetna's high technology operations. This commentor requests the DEP amend RCSA section 22a-174-22(a)(2)(B) to read as follows: "Results in a deviation in the voltage above or below the specifications of the manufacturer of the equipment at the facility or greater than ten percent (10%) above or below the standard nominal voltage specified by the public utility under requirements of RCSA section 16-11-114."

Response:

The intent of the Department in proposing such language is to link the definition of emergency to the standard voltage which any utility is obligated to provide each customer pursuant to regulations issued by the Department of Public Utility Control (DPUC). This intent is based on Departmental policy to discourage operation of emergency engines at times when voltage levels are within lawful parameters. Upon further review of DPUC regulations, a more appropriate range of acceptable voltage levels has surfaced. I recommend RCSA section 22a-174-22(a)(3)(B) be revised as follows:

> Results in a deviation of voltage from the utility to the premise of three percent (3%) above or five percent (5%) below standard voltage in accordance with subsection (a) of section 16-11-115 of the RCSA;

This language sets voltage parameters in accordance with DPUC regulations and clarifies that this subparagraph applies to voltage supplied by a utility to a premise.

Comments from Pratt & Whitney (P&W)

Comment:

1. RCSA section 22a-174-22(k), Emissions testing and monitoring - P&W notes that, although there are no proposed changes to this subsection, the current stack testing requirement does not allow the Commissioner to waive stack testing or accept an alternative compliance method in lieu of stack testing where a source is able to prove that source testing is not beneficial to the environment and/or is technically or economically infeasible. P&W requests the DEP amend section 22a-174-22(k) to allow the use of NOx Emission Reduction Credits (ERCs) to meet the requirements of this subsection. P&W proposes the appropriate number of ERCs be obtained by multiplying the predicted NOx emissions created during the prescribed testing protocol for each source by an applicable emission factor (AP-42) and then rounding the resulting ERC value up to the nearest ton.

Response:

This commentor correctly noted that there are no proposed changes to subsection (k) concerning emissions testing and monitoring. The Department is precluded from revising language that has not been properly noticed for public comment. At this juncture, I may only recommend the Department consider these comments during the next revision to section 22a-174-22 of the RCSA.

Comment:

2. RCSA section 22a-174-22(i), Schedule modification - P&W comments the proposed language restricting operation during "conditions that will be conducive to the formation of high levels of ozone" must be further defined to clarify DEP's intent.

Response

Please see response to RWA comment #1.

Additional Comments by the Hearing Officer

First, I recommend the definition of "emergency engine" be clarified to state that contracts for the supply of electricity during the loss of nuclear derived electrical power is for use ***within*** the State of Connecticut, not ***by*** the State of Connecticut. I recommend the definition of "emergency engine" be clarified to read as follows:

> "Emergency engine" means a stationary reciprocating engine or a turbine engine which is used as a means of providing mechanical or electrical power only during periods of testing and scheduled maintenance or during either an emergency or in accordance with a contract intended to ensure an adequate supply of electricity for use within the State of Connecticut during the loss of electrical power derived from nuclear facilities. The term does not include an engine for which the owner or operator of such engine is a party to any other agreement to sell electrical power from such engine to a utility, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability.

Second, the notice of intent as published October 1, 1996 in the *Connecticut Law Journal* did not fully describe all proposed amendments to this regulation. I specifically refer to subdivision (3) of subsection (j) which seeks to replace a citation to the U.S. Environmental Protection Agency's "Economic Incentive Program Rules; Proposed Rules" (the proposed EIP rule) (58 FR 11110, February 23, 1993) with a citation to the "Economic Incentive Program Rules; Final Rules and Guidance" (the final EIP rule) (59 FR 16690, April 7, 1994). As this proposed change was not specifically stated in the public notice, and the proposed EIP rule differs from the final EIP rule, I

recommend the final wording of section 22a-174-22 of the RCSA refer only to the proposed EIP rule at 58 FR 11110, February 23, 1992.

Third, section 22a-174-22 of the RCSA as drafted for public comment contained a typographical error in subdivision (3) of subsection (d). I recommend the federal register citation be amended to read as follows: "(Federal Register, Vol. 57, No. 228, Page 55623)." The previous draft identified the edition number as 226.

Finally, several internal citations within the proposed rule have been clarified by being made consistent with standard uniform citations.

V. Final Wording of the Proposed Regulation

I recommend RCSA section 22a-174-22, Control of Nitrogen Oxides Emissions, be amended to read as follows:

22a-174-22. Control of Nitrogen Oxides Emissions

(a) Definitions

For purposes of this section, the following definitions shall apply:

(1) "CONTRACT" MEANS: (A) AN AGREEMENT BETWEEN A UTILITY AND A CUSTOMER (OR OTHER PERSON) TO PROVIDE ELECTRICITY; OR (B) A CHANGE IN ANY AGREEMENT BETWEEN A UTILITY AND A CUSTOMER (OR OTHER PERSON) TO PROVIDE ELECTRICITY.

[(1)] (2) ["Emergency generator"] "EMERGENCY ENGINE" means a STATIONARY reciprocating engine or a turbine engine which is used as a means of providing mechanical or electrical power only during periods of TESTING AND scheduled maintenance or during EITHER an emergency [situation] OR IN ACCORDANCE WITH A CONTRACT INTENDED TO ENSURE AN ADEQUATE SUPPLY OF ELECTRICITY FOR USE WITHIN THE STATE OF CONNECTICUT DURING THE LOSS OF ELECTRICAL POWER DERIVED FROM NUCLEAR FACILITIES. The term does not include an engine for which the owner or operator OF SUCH ENGINE is party to [an] ANY OTHER agreement to sell electrical power from such engine to

a utility, or OTHERWISE receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability.

[(2)] (3) "Emergency [situation]" means [any of the following situations, resulting from] AN UNFORESEEABLE condition[s] THAT IS beyond the control of the owner or operator [of the premise at which the emergency generator is located and of the owner or operator of the utility providing primary electrical power] OF AN EMERGENCY ENGINE AND THAT:

(A) [An] RESULTS IN AN interruption [in service] of ELECTRICAL power from the utility to the premise;

(B) [A reduction] RESULTS IN A DEVIATION [in the voltage below the specifications of the manufacturer of the equipment at the facility] OF VOLTAGE FROM THE UTILITY TO THE PREMISE OF THREE PERCENT (3%) ABOVE OR FIVE PERCENT (5%) BELOW STANDARD VOLTAGE IN ACCORDANCE WITH SUBSECTION (A) OF SECTION 16-11-115 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES (RCSA); [or]

(C) [A situation that requires] REQUIRES AN interruption of electrical power FROM THE UTILITY TO THE PREMISE [to enable] ENABLING the owner or operator [of the premise] to perform emergency repairs[.]; OR

(D) REQUIRES OPERATION OF THE EMERGENCY ENGINE TO MINIMIZE DAMAGE FROM FIRE, FLOOD, OR ANY OTHER CATASTROPHIC EVENT, NATURAL OR MAN-MADE.

[(3)] (4) "Gas" or "gaseous fuel" means natural gas, propane, or any other fuel that is in the gaseous state under standard conditions.

[(4)] (5) "gm/bk hp-hr" means grams per brake horsepower-hour.

[(5)] (6) "lb" means pound.

[(6)] (7) "MMBTU" means million BTU of heat input.

[(7)] (8) "MMBTU/hr" means million BTU of heat input per hour.

[(8)] (9) "MRC" means maximum rated capacity.

[(9)] (10) "Major stationary source of NOx" means a premise with potential emissions of NOx equal to or greater than fifty (50) tons per year in a serious nonattainment area for ozone, or twenty-five (25) tons per year in a severe nonattainment area for ozone.

[(10)] (11) "Other boiler" means a boiler that is not a cyclone furnace, fast-response double-furnace naval boiler, or fluidized-bed combustor.

[(11)] (12) "Other oil" means a fuel that is liquid at standard conditions and is not residual oil.

[(12)] (13) "ppmvd" means parts per million by volume on a dry basis.

(14) "PREMISE" HAS THE SAME MEANING AS SECTION 22a-174-1 OF THE RCSA.

[13)] (15) "Reciprocating engine" means a stationary internal combustion engine having a crankshaft turned by linearly reciprocating pistons.

[14)] (16) "Selective noncatalytic reduction" means emission control technology which involves the injection of a chemical reagent at high flue gas temperatures to selectively reduce NOx emissions to nitrogen and water.

[15)] (17) "Turbine engine" means a stationary internal combustion engine which continuously converts an air-fuel mixture into rotational mechanical energy through the use of moving vanes attached to a rotor.

(18) "UTILITY" MEANS ANY ELECTRIC PUBLIC SERVICE COMPANY AS DEFINED IN SECTION 16-1 OF THE GENERAL STATUTES AND ANY MUNICIPAL ELECTRIC UTILITY COMPANY AS DEFINED IN SECTION 7-233b OF THE GENERAL STATUTES.

[(16)] (19) "Waste combustor" means an incinerator as defined in subsection 22a-174-18(c) of the RCSA [Regulations of Connecticut State Agencies], a resources recovery facility as defined in section 22a-207 of the [Connecticut] General Statutes, or a sewage sludge incinerator. The term does not include a flare or an industrial fume incinerator.

(b) Applicability

[(b)] (1) This section shall apply to the owner or operator of any of the following sources:

(A) Any reciprocating engine which has a maximum rated capacity of three (3) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(B) Any fuel-burning equipment, other than a reciprocating engine, which has a maximum rated capacity of five (5) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(C) Any equipment which burns fuel for heating materials and which has a maximum rated capacity of five (5) [million BTU per hour] MMBTU/HR or more and which is located at a premise that is a major stationary source of NOx;

(D) Any waste combustor which has a design capacity of two thousand (2000) pounds or more of waste per hour and which is located at a premise that is a major stationary source of NOx; or

(E) Any fuel-burning equipment, waste combustor, or process source which has potential emissions of NOx in excess of the following:

(i) One hundred thirty-seven (137) pounds during any day from May 1 through September 30 of any year, for a source located in a severe nonattainment area for ozone; or

(ii) Two hundred seventy-four (274) pounds during any day from May 1 through September 30 of any year, for a source located in a serious nonattainment area for ozone.

[(b)](2) [Subsections (d)] SUBDIVISION (d)(2) through SUBSECTION (k), inclusive, of this section shall not apply to the owner or operator of a premise if the actual emissions of NOx since January 1, 1990 from such premise have not exceeded twenty-five (25) tons in any calendar year for a premise in a severe nonattainment area for ozone, or fifty (50) tons in any calendar year for a premise in a serious nonattainment area for ozone. Notwithstanding this provision, [subsections (d)] SUBDIVISION (d)(2) through SUBSECTION (k), inclusive, of this section shall apply if AFTER MAY 31, 1995, such owner or operator exceeds emissions of NOx as follows:

(A) In any calendar year: twenty-five (25) tons for a premise located in a severe nonattainment area for ozone, or fifty (50) tons for a premise located in a serious nonattainment area for ozone; or

(B) On any day from May 1 through September 30 of any year: one hundred thirty-seven (137) pounds for a premise located in a severe nonattainment area for ozone or two hundred seventy-four (274) pounds for a premise located in a serious nonattainment area for ozone.

[(b)](3) Subsections (d) through (k) of this section shall not apply to an emergency [generator] ENGINE. In addition, the actual emissions from emergency [generators] ENGINES operating during an emergency [situation,] shall not be included in the determination of the applicability of subparagraph (b)(2)(B) of this section.

(4) THE OWNER OR OPERATOR OF AN EMERGENCY ENGINE SHALL NOT INCLUDE THE ACTUAL EMISSIONS FROM ANY SUCH ENGINE FOR PURPOSES OF DETERMINING APPLICABILITY IN ACCORDANCE WITH SUBPARAGRAPH (B) OF SUBDIVISION (2) OF THIS SUBSECTION, PROVIDED SUCH EMISSIONS RESULT FROM

OPERATION IN ACCORDANCE WITH A CONTRACT WITH A UTILITY OPERATING PURSUANT TO A PERMIT OR ORDER WHICH:

(A) REQUIRES THE PERMITTEE TO MAINTAIN A LIST WHICH IDENTIFIES ALL SOURCES WITH WHOM THE PERMITTEE HAS A CONTRACT;

(B) REQUIRES EITHER THE PERMITTEE OR THE OWNER OR OPERATOR OF THE EMERGENCY ENGINE TO RECORD AND SUBMIT TO THE COMMISSIONER DATA ON FUEL CONSUMPTION AND HOURS OF OPERATION OF ANY EMERGENCY ENGINE OPERATING UNDER SUCH CONTRACT; AND

(C) REQUIRES THE PERMITTEE TO OBTAIN NOX EMISSION REDUCTIONS TO OFFSET THE NOX EMISSIONS THAT RESULT FROM THE GENERATION OF CUSTOMER-CONTRACTED ELECTRICITY.

(5) NOTWITHSTANDING SUBDIVISION (3) OF THIS SUBSECTION, SUBSECTIONS (d) THROUGH (k) OF THIS SECTION SHALL APPLY TO THE OWNER OR OPERATOR OF AN EMERGENCY ENGINE IF, AFTER MAY 1, 1997, SUCH ENGINE OPERATES FOR ROUTINE, SCHEDULED TESTING OR MAINTENANCE ON ANY DAY FOR WHICH THE COMMISSIONER HAS FORECAST THAT OZONE LEVELS WILL BE "MODERATE TO UNHEALTHFUL," "UNHEALTHFUL," OR "VERY UNHEALTHFUL." THE COMMISSIONER MAY EXEMPT, BY PERMIT OR ORDER, THE OWNER OR OPERATOR OF AN EMERGENCY ENGINE FROM THIS SUBDIVISION, IF SUCH EMERGENCY ENGINE IS UNATTENDED, THE TESTING IS AUTOMATED AND CANNOT BE MODIFIED FROM A REMOTE LOCATION.

(c) Exemption.

This section shall not apply to mobile sources.

(d) General requirements.

[(d)](1) Prior to May 31, 1995, the owner or operator of any source subject to this section shall not cause or allow emissions of NOx from such source in excess of the emission limitation specified in Table 22-1 of this section. The owner or operator of any source which is

not subject to an emission limitation in Table 22-1 of this section shall not cause or allow emissions of NOx from such source in excess of seven hundred (700) ppmvd.

TABLE 22-1

NOX EMISSION LIMITATIONS PRIOR TO MAY 31, 1995
(IN POUNDS PER MMBTU OF HEAT INPUT)

	GAS-FIRED	OIL-FIRED	COAL-FIRED
Turbine engine	0.9	0.9	NA
Cyclone furnace	0.9	0.9	0.9
Fast-response double-furnace Naval boiler	0.5	0.5	0.9
Other boiler, with MRC of 250 MMBTU/hr or more	0.9	0.3	0.9
Other boiler, with MRC less than 250 MMBTU/hr	0.2	0.3	0.9

[(d)](2) On and after May 31, 1995, the owner or operator of any source subject to this section shall:

(A) comply with all applicable emission limitations for such source in subsection (e) of this section;

(B) comply with the provisions for multi-fuel sources in subsection (f) of this section;

(C) reduce the NOx emission rate from such source by forty percent (40%), pursuant to subsection (g) of this section, in accordance with a permit issued by the Commissioner;

(D) reconstruct the source, pursuant to subsection (h) of this section, in accordance with a permit issued by the Commissioner; or

(E) modify the schedule of operations at the source, pursuant to subsection (i) of this section, in accordance with a permit issued by the Commissioner.

[(d)](3) The owner or operator of a source subject to this section may apply in writing to the Commissioner for an extension to comply with subdivision [(d)](2) OF THIS SUBSECTION. The Commissioner may grant such extension for a period not to exceed one (1) year, through a permit. Such permit shall meet the Administrator's requirements for "Phase-in of Controls Beyond May 1995" ([FR.] FEDERAL REGISTER, Vol. 57, No. [266] 228, Page 55623). The Commissioner shall submit such permit or order to the Administrator for approval in accordance with the provision of 42 U.S.C. 7401-7671q.

[(d)](4) The owner or operator, in accordance with an order or permit issued by the Commissioner, may use emission reduction trading, pursuant to subsection (j) of this section, to achieve all or a portion of the reductions required by this section. The Commissioner shall submit such permit or order to the Administrator for approval in accordance with the provision of 42 U.S.C. 7401-7671q.

[(d)](5) Nothing herein shall preclude the Commissioner from issuing an order to an owner or operator to comply with the requirements of this subsection.

(e) Emission limitations.

[(e)](1) The owner or operator of a stationary source subject to this section may, in accordance with subparagraph [(d)(2)](A) OF SUBDIVISION (d)(2) of this section, comply with the requirements of this section by meeting applicable emission limitations specified in Table 22-2 of this section. Emission limitations in Table 22-2 for turbine engines that are quantified in units of ppmvd shall be corrected to fifteen percent (15%) oxygen. For

any source for which there is no applicable emission limitation in Table 22-2, the owner or operator of such source shall not cause or allow emissions of NOx therefrom in excess of the following:

(A) For fuel-burning equipment fired by a fuel other than those fuels cited in Table 22-2: 0.3 pounds per [million BTU of heat input] MMBTU;

(B) For any waste combustor subject to the requirements of subdivision [(e)](2) OF THIS SUBSECTION: 0.38 pounds per [million BTU of heat input] MMBTU[.];

(C) For any waste combustor not subject to the requirements of subparagraph [(e)](1)(B) OF THIS SUBSECTION which has a waterwall furnace: 0.38 pounds per [million BTU of heat input] MMBTU[.];

(D) For any other waste combustor: 0.33 pounds per [million BTU of heat input] MMBTU[.];

(E) For a glass melting furnace: 5.5 pounds of NOx per ton of glass produced;

(F) For a source, other than a glass melting furnace, which burns fuel for heating materials: 180 ppmvd, corrected to twelve percent (12%) carbon dioxide; or

(G) For any source not having an emission limitation in subparagraphs [(e)(1)](A) through [(e)(1)](F) of this [section] SUBDIVISION: seven hundred (700) ppmvd.

[(e)](2) In addition to complying with the emission limitation in subparagraph [(e)](1)(B) OF THIS SUBSECTION, by May 31, 1995 the owner or operator of any waste combustor which combusts refuse derived fuel shall install and operate selective noncatalytic reduction or other NOx emissions control technology capable of reducing the NOx emission rate by at least thirty percent (30%) from the average emission rate in calendar year 1990 on one boiler unit at such facility. If the Commissioner determines that

operations during 1990 were not representative of normal operations of the facility, the Commissioner may use another calendar period which is more representative. In addition, actual annual average NOx emissions from other boiler units at such facility shall each not exceed 420 tons per year. The Commissioner may consider, in the same manner as for other sources, any emission reduction below 0.38 pounds per [million BTU of heat input] MMBTU to be eligible as surplus emissions reductions for purposes of emission reduction credits pursuant to subsection (j) of this section until May 31, 1999.

TABLE 22-2
NOX EMISSION LIMITATION ON AND AFTER MAY 31, 1995

	GAS-FIRED	RESIDUAL-OIL-FIRED	OTHER OIL-FIRED	COAL-FIRED
Turbine engine, with 100 MMBTU/hr or greater MRC	55 ppmvd	not applicable	75 ppmvd	not applicable
Turbine engine, with MRC less than 100 MMBTU/hr	0.90 lb/MMBTU	not applicable	0.90 lb/MMBTU	not applicable
Cyclone furnace	0.43 lb/MMBTU	0.43 lb/MMBTU	0.43 lb/MMBTU	0.43 lb/MMBTU
Fast-response double-furnace Naval boiler	0.20 lb/MMBTU	0.30 lb/MMBTU	0.30 lb/MMBTU	0.30 lb/MMBTU
Fluidized bed combustor	not applicable	not applicable	not applicable	0.29 lb/MMBTU
Other boiler	0.20 lb/MMBTU	0.25 lb/MMBTU	0.20 lb/MMBTU	0.38 lb/MMBTU
Reciprocating engine	2.5 gm/bk hp-hr	not applicable	8 gm/bk hp-hr	not applicable

(f) Multi-fuel sources.

[(f)](1) When, PURSUANT TO SUBPARAGRAPH (B) OF SUBDIVISION (d)(2) OF THIS SECTION, the owner or operator of a source switches the use of fuel, converts to a new fuel, or is capable of burning two or more different fuels, such owner or operator shall comply with the requirements of this subsection.

[(f)](2) The owner or operator of a source that is capable of firing two or more fuels shall not cause or allow emissions of NOx from such source, in excess of the following:

(A) For fuel-burning equipment that simultaneously fires two or more different fuels: an emission limitation calculated by 1) multiplying the heat input of each fuel combusted by the emission limitation established in this section for such fuel, 2) summing those products, and 3) dividing the sum by the total heat input; or

(B) For fuel-burning equipment that is capable of interchangeably firing two or more fuels: the emission limitation in Table 22-2 for the particular equipment and fuel used. Notwithstanding this requirement, the owner or operator of a source that operates exclusively on other oil or gas from May 1 through September 30 of any year and on another fuel during the remainder of the year shall not cause or allow emissions of NOx from such source in excess of 0.2 pounds per [million BTU of heat input] MMBTU from May 1 through September 30 and 0.29 pounds per [million BTU of heat input] MMBTU for the remainder of the year.

[(f)](3) The owner or operator of a source which, on or after January 1, 1990, converts the fuel used at such source, shall not cause or allow emissions of NOx from such source in excess of the following:

(A) 0.29 pounds per [million BTU of heat input] MMBTU, when the source burned coal to provide more than fifty percent (50%) of its total heat input during

the last full calendar year immediately prior to such conversion; or

(B) 0.225 pounds per [million BTU of heat input] MMBTU, if the source burned residual oil to provide more than fifty percent (50%) of its total heat input during the last full calendar year immediately prior to such conversion.

(g) Forty percent (40%) reduction.

[(g)](1) When the owner or operator of any source reduces the NOx emission rate from such source by forty percent (40%), as provided in subparagraph [(d)(2)](C) OF SUBDIVISION (d)(2) of this section, such owner or operator shall comply with the emission limitations of this section established in a permit issued by the Commissioner. Such permit shall specify such source's NOx emission limitation to be the more restrictive of:

(A) sixty percent (60%) of such source's emission rate at maximum capacity during calendar year 1990; or

(B) sixty percent (60%) of [such source's] THE emission limitation in [Table 22-1 of subdivision (d)(1)] APPLICABLE TO THE SOURCE ON JANUARY 1, 1990.

Such permit shall express the NOx emission limitation in the same units of measurement as the NOx emission limitation that would otherwise apply to such source in subsection (e) OF THIS SECTION.

[(g)](2) To determine the actual emission rate specified in subparagraph [(g)](1)(A) of this subsection, such owner or operator shall conduct an emission test at such source under operating conditions representative of those conditions in existence at the source in calendar year 1990, at the maximum capacity at which the source was operated during such calendar year.

[(g)](3) If the Commissioner determines that operations during calendar year 1990 were not representative of normal

operations from such source, the Commissioner may use another calendar year which is more representative.

(h) Reconstruction or replacement.

[(h)](1) If the owner or operator of a source proves, to the satisfaction of the Commissioner, that compliance with subsections (e) or (g) of this section is not technologically or economically feasible at such source, the Commissioner may allow the owner or operator, through a permit, to comply with this section by reconstructing the existing source, or replacing the existing source with a new source. Such reconstruction or replacement shall be completed no later than May 31, 1999.

[(h)](2) Such permit shall require that, prior to the completion of reconstruction or replacement of such source, the NOx emission rate from the existing source not exceed the more restrictive of:

(A) the emission limitation [in subdivision (d)(1)] APPLICABLE TO THE SOURCE ON JANUARY 1, 1990; or

(B) the emission limitation of any current permit or order issued by the Commissioner for such source.

[(h)](3) Such permit shall require the owner or operator, by May 31, 1995, to deposit into an escrow account an amount equal to $1,000 multiplied by the number of pounds per day of NOx emission reductions that would be needed by the existing source to achieve compliance with the emission limitations in subsection (e) of this section. The terms of such escrow account and escrow agent required by such permit shall be subject to the approval of the Commissioner. The Commissioner may require that such escrow account be established and properly insured against default at an institution authorized to operate in Connecticut by the State's Commissioner of Banking. In determining the acceptability of an escrow agent, the Commissioner shall consider the reliability and trustworthiness of the person acting as the escrow agent. The

Commissioner shall also consider the escrow agent's ability to insure that any money deposited into such escrow account will be withdrawn upon written notification in accordance with such permit.

[(h)](4) After completion of such reconstruction or replacement, the owner or operator may, upon written notification by the Commissioner, withdraw funds from the escrow account in accordance with such permit described in subdivision [(h)](3) OF THIS SUBSECTION. If the owner or operator fails to complete reconstruction or replacement by the date set forth in the permit, such owner or operator shall use such funds to acquire emission reduction credits upon written notice from the Commissioner.

(i) Schedule modification.

[(i)](1) If the owner or operator of a source proves to the satisfaction of the Commissioner that it is not technologically or economically feasible for such source to comply with the emission limitations in subsections (e) through (g) of this section, the Commissioner may by permit require NOx emission reductions through modifications of the schedule of NOx-emitting activities and implementation of other measures to reduce NOx emissions at such source. Such permit may include restrictions on operations on any day for which the Commissioner has forecast that ozone levels will be "moderate to unhealthful," "unhealthful," or "very unhealthful."

[(i)](2) This subsection shall only apply to the following:

(A) Oil-fired turbine engines or [Fast-response] FAST-RESPONSE double-furnace Naval boilers that generate power to create simulated high-altitude atmospheres for the testing of aircraft engines; or

(B) Testing of fuel-burning equipment undergoing research and development.

(j) Emissions reduction trading.

[(j)](1) When the owner or operator of a source uses emission reduction trading to comply with this section, such owner or operator shall achieve reductions in NOx emissions which, at a minimum, are equivalent to those emission reductions that would be achieved by complying with all applicable emission limitations in subsection (e) of this section. The Commissioner may allow the use of emission reduction trading through the issuance of a permit. Such permit shall require the owner or operator, by May 31, 1995, to perform emission trading or to deposit into an escrow account an amount equal to $2000 multiplied by the number of pounds per day of NOx emission reductions needed to achieve compliance with the emission limitations in subsection (e) of this section. Such order or permit also shall require the owner or operator to withdraw and use such funds to acquire ERCs upon written notice from the Commissioner. The terms of such escrow account and escrow agent required by such permit shall be subject to the approval of the Commissioner. The Commissioner shall require that such escrow account be established and properly insured against default at an institution authorized to operate in Connecticut by the State's Commissioner of Banking. In determining the acceptability of an escrow agent, the Commissioner shall consider the reliability and trustworthiness of the person acting as the escrow agent. The Commissioner shall also consider the escrow agent's ability to insure that any money deposited into such escrow account will be withdrawn upon written notification in accordance with such permit.

[(j)](2) In order to comply with subdivision [(j)](1) of this subsection, such owner or operator shall conduct an emission test or submit another method acceptable to the Commissioner to estimate the NOx emission limitation shortfall. Such emission test shall be conducted under operating conditions which demonstrate the maximum emission rate of such source. Such emission test shall be certified pursuant to subsection (k) of this section.

[(j)](3) Any creation or use of ERCs for the purpose of this subsection shall be consistent with the provisions of the U.S. Environmental Protection Agency's "Economic Incentive Program Rules; Proposed Rules," published February 23, 1993 (Federal Register, Volume 58, Number 34), and the U.S. Environmental Protection Agency's "Emissions Trading Policy Statement," published December 4, 1986 (Federal Register, Volume 51, Number 233).

(k) Emissions testing and monitoring.

[(k)](1) The owner or operator of any source subject to an emission limitation under this section shall conduct an emission test to demonstrate compliance with this section no later than May 31, 1995. Any such owner or operator which does not install or operate a continuous emissions monitor at such source shall also conduct emission tests at least once every five years. Compliance with the emission limitations of this section shall be determined based on the average of three (3) one-hour tests, each performed over a consecutive 60-minute period and performed in accordance with SECTION [Section] 22a-174-5 OF THE RCSA. Any analysis of nitrogen content conducted as part of such emission testing shall be in accordance with Method D-3228 of the American Society for the Testing of Materials.

[(k)](2) The owner or operator shall demonstrate compliance with emission limitations of this section using sampling and analytical procedures approved under 40 CFR Part 60, Appendix A, or under procedures in subsection 22a-174-5(d) OF THE RCSA. Sampling shall be conducted when the source is at normal operating temperature and, UNLESS ALLOWED OTHERWISE BY THE COMMISSIONER IN A PERMIT OR ORDER, is operating at or above ninety percent (90%) of maximum rated capacity for a fuel-burning source or at or above ninety percent (90%) of design capacity for a waste combustor. Notwithstanding such requirement, any source which has operated in excess of one hundred percent (100%) of its maximum rated capacity at any time since January 1,

1990 shall be tested when the source is operating at or above ninety percent (90%) of its highest operating rate since January 1, 1990.

[(k)](3) On and after May 31, 1995, the owner or operator of any source that emitted more than one hundred (100) tons of NOx from a single stack during any calendar year beginning January 1, 1990, shall install, calibrate, maintain, operate, and certify a continuous emissions monitor for NOx for each such stack. The owner or operator shall notify the Commissioner in writing at least thirty (30) days prior to conducting any performance or quality assurance testing of any such monitor. Any such testing shall be conducted in accordance with a testing protocol approved by the Commissioner. Any continuous emission monitor for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in 40 CFR 60, Subpart A, Appendix B and Appendix F.

[(k)](4) Unless otherwise specified by the Commissioner in a permit or order, the averaging times for the emission limitations in this section for a source that has, or is required to have, a continuous emissions monitor for NOx shall be twenty-four (24) hours, measured from midnight at the beginning of any day to midnight of the end of that day and shall include all periods of operation, including startup, shutdown, and malfunction.

[(k)](5) The owner or operator of a source subject to this subsection may apply in writing to the Commissioner for an extension to comply with this subsection. The Commissioner may grant such extension for a period not to exceed one (1) year through a permit or order.

(l) Reporting and record keeping.

[(l)](1) The owner or operator of any source subject to this section, shall keep the following records:

(A) [Daily] FOR AN EMERGENCY ENGINE, DAILY records of

[the] operating hours of such [source] ENGINE, IDENTIFYING THE OPERATING HOURS OF EMERGENCY AND NON-EMERGENCY USE;

(B) [Daily] FOR ANY PREMISE FOR WHICH SUBDIVISION (b)(2) OR (b)(3) OF THIS SECTION APPLIES, records [of fuel use and NOx emissions from such source(in pounds per day)] (E.G. FUEL USE, CONTINUOUS EMISSIONS MONITORING, OPERATING HOURS) TO DETERMINE WHETHER THE NOX EMISSIONS FROM SUCH PREMISE ON ANY DAY FROM MAY 1 THROUGH SEPTEMBER 30, INCLUSIVE, ARE IN EXCESS OF ONE HUNDRED THIRTY-SEVEN (137) POUNDS FOR A PREMISE LOCATED IN A SEVERE NONATTAINMENT AREA FOR OZONE OR TWO HUNDRED SEVENTY-FOUR (274) POUNDS FOR A PREMISE LOCATED IN A SERIOUS NONATTAINMENT AREA FOR OZONE;

(C) Monthly and annual records (E.G. FUEL USE, CONTINUOUS EMISSIONS MONITORING, OPERATING HOURS) TO DETERMINE WHETHER NOX EMISSIONS FROM SUCH PREMISE IN ANY CALENDAR YEAR ARE IN EXCESS OF TWENTY-FIVE (25) TONS FOR A PREMISE LOCATED IN A SEVERE NONATTAINMENT AREA FOR OZONE OR FIFTY (50) TONS FOR A PREMISE LOCATED IN A SERIOUS NONATTAINMENT AREA FOR OZONE [of NOx emissions from such source(in tons)];

(D) Records of all tune-ups, repairs, replacement of parts and other maintenance [of such source];

(E) Copies of all documents submitted to the Commissioner pursuant to this section;

(F) For any source required to install, calibrate, and operate a continuous emissions monitor for NOx under subdivision (k)(3), all charts, electronically stored data, and printed records produced by such continuous emissions monitor;

(G) Procedures for calculating NOx emission rates in (B) and (C) above;

(H) Records of the dates, times, and places of all

emission testing required by this section, the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing;

(I) For any source required to install, calibrate, and operate a continuous emissions monitor for NOx under subdivision (k)(3) OF THIS SECTION, records of all performance evaluations, calibration checks and adjustments on such monitor; a record of maintenance procedures; and all data necessary to complete the quarterly reports required under subdivision (l)(4) of this section; and

(J) Any other records or reports required by an order or permit issued by the Commissioner pursuant to this section.

[(l)](2) Within thirty (30) days of the completion of emission tests conducted under the requirements of subdivision (k)(1) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner.

[(l)](3) Within sixty (60) days of the completion of certification tests conducted under the requirements of subdivision (k)(3) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner.

[(l)](4) The owner or operator of any source required to be equipped with a continuous emissions monitor for NOx under subdivision (k)(3) of this section shall submit to the Commissioner written quarterly reports of excess emissions and CEM malfunctions. Such reports shall be submitted to the Commissioner on or before January 30, April 30, July 30, and October 30 and shall include data for the three calendar month period ending the month before the due date of the report. For each period of excess emissions, such report shall include the date and time of commencement and completion of such period, the magnitude and suspected cause of the excess emissions and all actions taken to correct the

excess emissions. For each malfunction of the CEM system, such report shall include the date and time of when the malfunction commenced and ended, and all actions taken to correct the malfunction.

[(l)](5) The owner or operator of any source subject to this section shall retain all records and reports produced pursuant to the requirements of this section for five (5) years. Such records and reports shall be available for inspection at reasonable hours by the Commissioner or the Administrator. Such records and reports shall be retained at the source, unless the Commissioner approves in writing the use of another location in the State.

[(l)](6) On or before April 15 of each year, the owner or operator of any source subject to this section shall submit a report on NOx emissions from such source, on a form provided by the Commissioner.

[(l)](7) The Commissioner may use data recorded by continuous emissions monitors for NOx and any other records and reports to determine compliance with applicable requirements of this section.

(m) Compliance plans.

[(m)](1) The owner or operator of any source that is subject to this section shall submit a compliance plan to the Commissioner by September 1, 1994, on forms provided by the Commissioner. Such compliance plan shall document how the source will comply with all applicable requirements of this section. The owner or operator of any source which becomes subject to this section after May 1, 1994, shall submit a compliance plan within four (4) months of the date on which the source becomes subject to this section.

[(m)](2) Any compliance plan submitted pursuant to this subsection shall include a certification signed by a responsible corporate officer or a duly authorized representative of such officer, as those terms are defined in subdivision 22a-430-3(b)(2) of the RCSA

[Regulations of Connecticut State Agencies], and by the individual delegated by such officer with the responsibility of actually preparing the compliance plan. Such certification shall read as follows: "I have personally examined and am familiar with the information submitted in this compliance plan and all attachments. Based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, I certify that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in this compliance plan or its attachments may be punishable as a criminal offense."

[(m)](3) If a compliance plan does not contain all measures necessary to comply with all requirements of this section, the Commissioner may notify the owner or operator of such source of the deficiency. Such owner or operator shall resubmit a revised compliance plan within thirty (30) days of receipt of such notice.

Statement of Purpose: to make technical changes and clarifications to existing regulations for the control of emissions of nitrogen oxides.

VI. Conclusion

Based upon the comments submitted by interested parties and addressed in this Hearing Report, I recommend the proposed regulation, with the exception of the changes noted in Part IV, above, and as set forth in Part V of this report, be submitted by the Commissioner of Environmental Protection for approval by the Attorney General and the Legislative Regulations Review Committee. Based upon the same considerations, I also recommend this proposed regulation, upon promulgation, be submitted to the U.S. Environmental Protection Agency as a revision to the Connecticut State Implementation Plan for Air Quality.

Paul E. Farrell
Hearing Officer

11/26/96
Date

Attachment 1
List of Commentors

1. Mr. David Conroy, Manager
   Air Quality Planning Unit
   United States Environmental Protection Agency, Region I
   John F. Kennedy Federal Building
   Boston, MA 02203-0001

2. Mr. John P. Hudak, Senior Environmental Analyst
   South Central Connecticut Regional Water Authority
   90 Sargent Drive
   New Haven, CT 06511-5966

3. Mr. R.G. Chevalier, Vice President - Fossil/Hydro Engineering and Operations
   c/o Mr. Richard Miller, Manager, Environmental Regulatory Affairs
   Northeast Utilities Service Co., Connecticut Light & Power
   P.O. Box 270
   Hartford, CT 06141-6263

4. Ms. Corine L. Hellerman, Senior Project Engineer
   Sci-Tech, Inc.
   Suite 108
   20 Beaver Road
   Wethersfield, CT 06109

5. Mr. John P. Hinshelwood, Manager
   Safety & Environmental Unit, RC5A
   Aetna Business Resources
   151 Farmington Avenue
   Hartford, CT 06156

6. Mr. Barry Rimier, Contract Manager
   Aetna Business Resources, RWA4
   151 Farmington Avenue
   Hartford, CT 06156

7. Mr. Ronald H. Henson, Vice President
   Environment, Health & Safety/Engineering Assembly & Test
   Pratt & Whitney
   400 East Main Street M/S 162-31
   East Hartford, CT 06108