

**MEMORANDUM OF UNDERSTANDING  
AMONG THE STATES OF THE OZONE TRANSPORT COMMISSION  
ON DEVELOPMENT OF A REGIONAL STRATEGY CONCERNING THE CONTROL OF  
STATIONARY SOURCE NITROGEN OXIDE EMISSIONS**

WHEREAS, the States of the Ozone Transport Commission (OTC) face a pervasive problem in their efforts to attain the National Ambient Air Quality Standard (NAAQS) for ozone; and

WHEREAS, a 1991 National Academy of Sciences study on ground-level ozone indicates that a combination of reductions in emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) will be necessary to bring the entire Ozone Transport Region (OTR) into attainment by the statutory attainment dates; and

WHEREAS, modeling and other studies confirm that NO<sub>x</sub> emission reductions are effective in reducing ozone formation and help to reduce ozone transport; and

WHEREAS, the States of the OTC are requiring major stationary sources of NO<sub>x</sub> to implement reasonably available control technology (RACT); and

WHEREAS, by November 15, 1994, the States must submit attainment demonstrations to EPA as State Implementation Plan (SIP) revisions; and

WHEREAS, the implementation of RACT for the control of NO<sub>x</sub> emissions will not be sufficient to enable all States in the OTR to reach attainment; and

WHEREAS, the undersigned States seek to develop an effective regional program to reduce NO<sub>x</sub> emissions, which would be implemented in conjunction with other measures to control ozone precursors (including state-specific measures, regional measures and Federal measures required under the Clean Air Act); and

WHEREAS, these measures together may enable EPA to approve the States' SIPs and refrain from imposing sanctions that could restrict economic growth throughout the OTR; and

WHEREAS, information that the States have collected in their emissions inventories shows that large boilers and other large indirect heat exchangers are the source of a substantial portion of the NO<sub>x</sub> emissions in the States, and will continue to be so after they implement RACT;

WHEREAS, the States intend to complete a reevaluation of stationary source controls for 2003 and beyond in 1997, based on results of EPA-approved models and other relevant technical data;

THEREFORE, the undersigned member States hereby agree to propose regulations and/or legislation for the control of NO<sub>x</sub> emission from boilers and other indirect heat exchangers with a maximum gross heat input rate of at least 250 million BTU per hour; and

FURTHERMORE, that the States agree to propose regulations that reflect the difference in conditions in (i) the OTR's "Northern Zone" consisting of the northern portion of the OTR; (ii) the OTR's "Inner Zone" consisting of the central eastern portion of the OTR; and (iii) the OTR's "Outer Zone" consisting of the remainder of the OTR; and

FURTHERMORE, that to establish a credible emissions budget, the States agree to propose regulations that require enforceable specific reductions in NOx emissions from the actual 1990 emissions set forth in each State's 1990 inventory submitted to EPA in compliance with § 182(a) (1) of the Clean Air Act or in a similar emissions inventory prepared for each attainment area (provided that for exceptional circumstances that a more representative base year may be applied to individual sources in a manner acceptable to EPA) subject to public notice; and

FURTHERMORE, that the States agree to develop a budget in a manner acceptable to EPA based on the principles above no later than March 1, 1995; and

FURTHERMORE, if such a budget is not developed by March 1, 1995, that the 1990 interim inventory used by EPA in its Regional Oxidant Model simulations for the 1994 OTC Fall Meeting will be used for the budget; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Inner Zone to reduce their rate of NOx emissions by 65 percent from base year levels by May 1, 1999, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Outer Zone to reduce their rate of NOx emissions by 55 percent from base year levels by May 1, 1999, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require sources in the Inner Zone and the Outer Zone to reduce their rate of NOx emissions by 75 percent from base year levels by May 1, 2003, or to emit NOx at a rate no greater than 0.15 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Northern Zone to reduce their rate of NOx emissions by 55 percent from base year levels by May 1, 2003, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to develop a regionwide trading mechanism in consultation with EPA; and

FURTHERMORE, that in lieu of proposing the regulations described above, a State may propose regulations that achieve an equivalent reduction in stationary source NOx emissions in an equitable manner; and

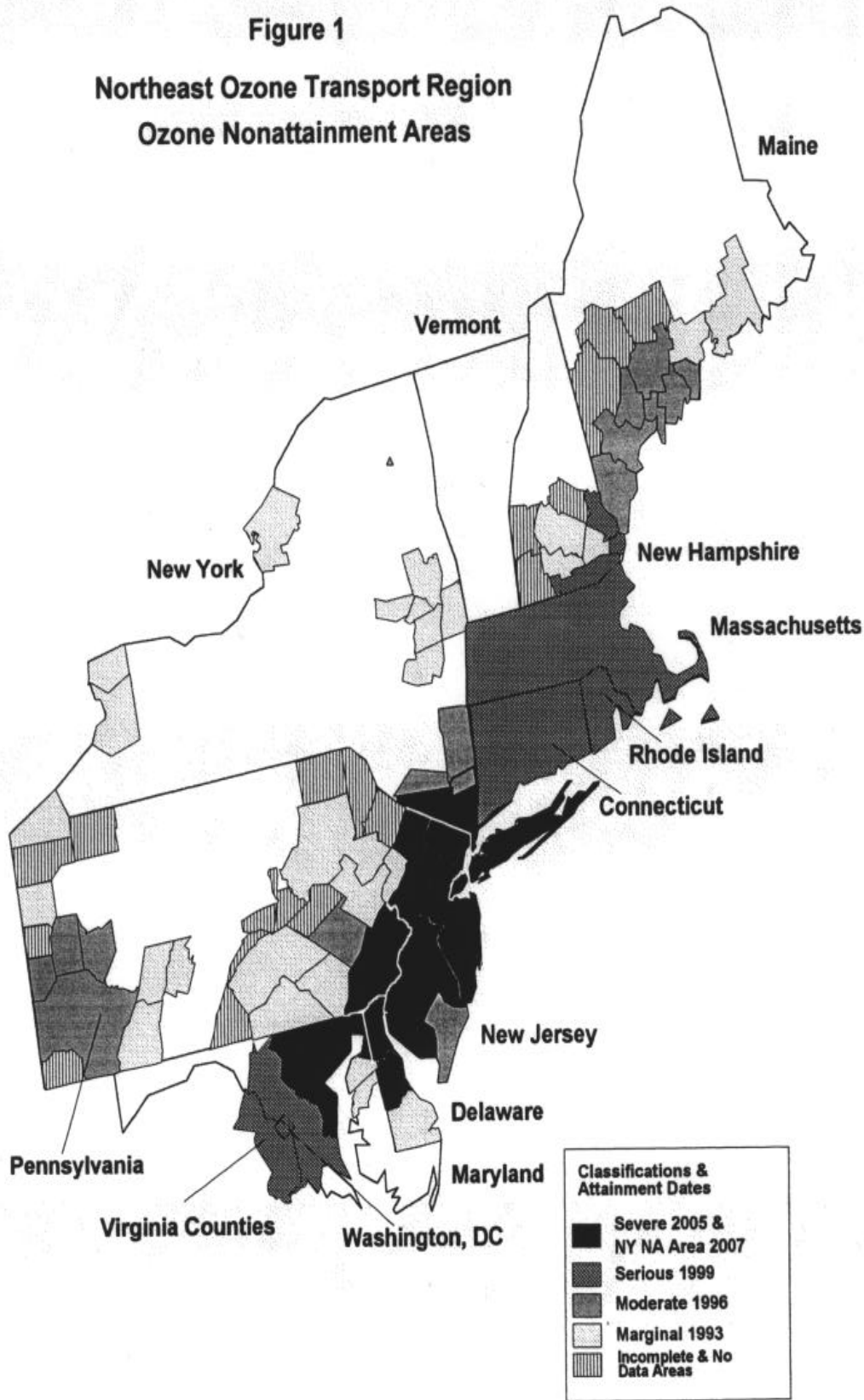
FURTHERMORE, that the regulations for May 1, 2003 described above may be modified if (i) additional modeling and other scientific analysis shows that the regulations as modified, together with regulations governing VOC emissions, will achieve attainment of the ozone

NAAQS across the OTR, and (ii) this Memorandum of Understanding is modified to reflect those modeling results and other analysis no later than December 31, 1998; and

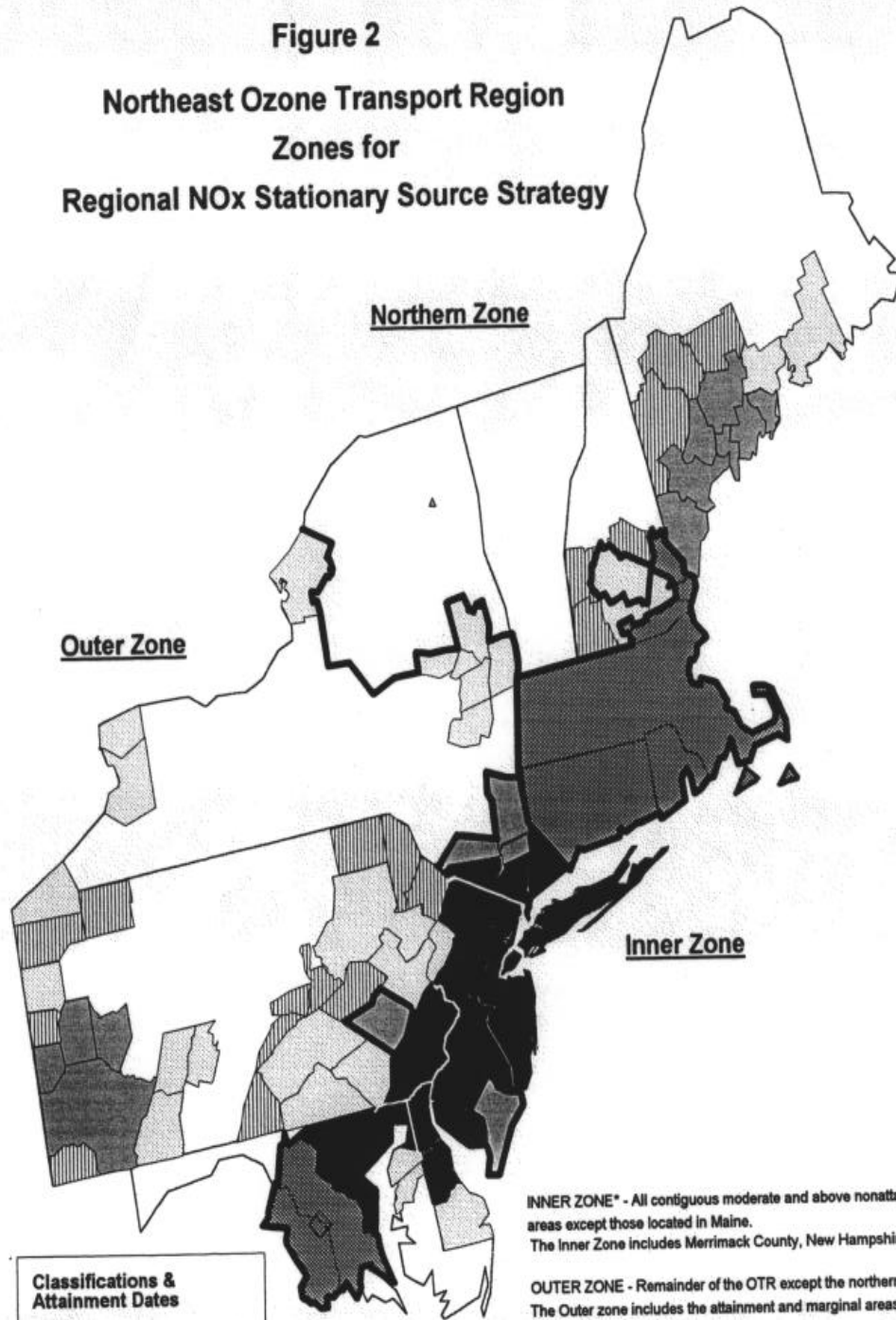
FURTHERMORE, that the States agree to propose regulations that are otherwise consistent with the attached recommendations of the OTC's Stationary/Area Source Committee; and

FURTHERMORE, that the undersigned States agree to request that the EPA Administrator determine whether the SIPs of States outside the OTR contain adequate provisions to prohibit the emission of air pollutants in amounts that will contribute significantly to nonattainment of a National Ambient Air Quality Standard (NAAQS) within the OTR, as required under 42 U.S.C. Section 110(a)(2)(D).

**Figure 1**  
**Northeast Ozone Transport Region**  
**Ozone Nonattainment Areas**



**Figure 2**  
**Northeast Ozone Transport Region**  
**Zones for**  
**Regional NOx Stationary Source Strategy**



**Classifications & Attainment Dates**

- Severe 2005 & NY NA Area 2007
- Serious 1999
- Moderate 1996
- Marginal 1993
- ▨ Incomplete & No Data Areas

**INNER ZONE\*** - All contiguous moderate and above nonattainment areas except those located in Maine. The Inner Zone includes Merrimack County, New Hampshire.

**OUTER ZONE** - Remainder of the OTR except the northern zone. The Outer zone includes the attainment and marginal areas of southern Delaware and southern Maryland.

**NORTHERN ZONE** - Maine, Vermont and New Hampshire (except for its moderate and above nonattainment areas), and the northeastern attainment portion of New York

\* The Inner zone is based on existing attainment designations. If an area is redesignated attainment, it remains in the inner zone. However, if contiguous marginal areas are "bumped up" to moderate status, they become a part of the inner zone.

Signed this 27th day of September, 1994 by the following:

CONNECTICUT: Timothy R. Gunning

DELAWARE: Richard G. Nelson

DISTRICT OF COLUMBIA: Terrel Bishop

MAINE: Abraham H. Gannett

MARYLAND: Samuel

MASSACHUSETTS: TRUG ONE

NEW HAMPSHIRE: Robert W. V.

NEW JERSEY: Robert W. V.

NEW YORK: Harold M. West

PENNSYLVANIA: Arthur A. Fain

RHODE ISLAND: John

VERMONT: John

VIRGINIA: John