6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[FRL-XXXX-X]

Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: In accordance with section 126 of the Clean Air Act (CAA), EPA is taking final action on petitions filed by eight Northeastern States seeking to mitigate what they describe as significant transport of one of the main precursors of ground-level ozone, nitrogen oxides (NOx), across State boundaries. Each petition specifically requests that EPA make a finding that NOx emissions from certain stationary sources emit in violation of the CAA's prohibition on emissions that significantly contribute to ozone nonattainment problems in the petitioning State. If EPA makes such a finding, EPA is authorized to establish Federal emissions limits for the sources. The eight Northeastern States that filed petitions are Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont.

Today, EPA is making final determinations that portions

of six of the petitions are technically meritorious. The technically approvable portions of the petitions will be automatically deemed granted or denied at certain later dates pending certain actions by the States and EPA regarding State submittals in response to the final NOx State implementation plan call (NOx SIP call). This rule describes the schedule and conditions under which applicable final findings on the petitions would be automatically triggered.

The EPA intends to implement the section 126 control remedy through a Federal NOx Budget Trading Program. The trading program would apply to sources in the source categories for which a final finding is ultimately granted. In today's rule, EPA is finalizing the general parameters of the trading program. The EPA is committing to promulgate the details of the trading program by July 15, 1999. The EPA is including interim final emissions limitations for affected sources which would apply only if EPA fails to promulgate the trading program prior to a section 126 finding.

Mitigation of the transport of ozone and its precursors is important because ozone, which is a primary harmful component of urban smog, has long been recognized, in both clinical and epidemiological research, to adversely affect public health.

DATES: The final rule is effective [insert 60 days from publication].

ADDRESSES: Documents relevant to this action are available for inspection at the Air and Radiation Docket and Information Center (6102), Attention: Docket No. A-97-43, U.S. Environmental Protection Agency, 401 M Street SW, room M-1500, Washington, DC 20460, telephone (202) 260-7548 between 8:00 a.m. and 5:30 p.m., Monday though Friday, excluding legal holidays. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: General questions concerning today's action should be addressed to Carla Oldham, Office of Air Quality Planning and Standards, Air Quality Strategies and Standards Division, MD-15, Research Triangle Park, NC, 27711, telephone (919) 541-3347, email at oldham.carla@epa.gov. Please refer to **SUPPLEMENTARY INFORMATION** below for a list of contacts for specific subjects discussed in today's action.

SUPPLEMENTARY INFORMATION:

Availability of Related Information

The official record for this rulemaking, as well as the public version, has been established under docket number A-97-43 (including comments and data submitted electronically as described below). A public version of this record,

including printed, paper versions of electronic comments, which does not include any information claimed as confidential business information, is available for inspection from 8:00 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays. The official rulemaking record is located at the address in ADDRESSES at the beginning of this document. In addition, the rulemaking Federal Register notices and associated documents are located at http://www.epa.gov/ttn/rto/126.

The EPA has issued a separate rule on NOx transport entitled, "Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone" (see notices included in the docket for this rulemaking). The rulemaking docket for that rule (Docket No. A-96-56), hereafter referred to as the NOx SIP call, contains information and analyses that are relied upon in the section 126 rulemaking. Documents related to the NOx SIP call rulemaking are available for inspection in docket number A-96-56 at the address and times given above. In addition, the NOx SIP call and associated documents are located at http://www.epa.gov/ttn/otag/sip/index.html. Modeling and air quality assessment information can be obtained in electronic form at http://www.epa.gov.scram001/regmodcenter/t28.htm.

Information related to the budget development can be found at http://www.epa.gov/capi.

Additional information relevant to this section 126 rulemaking concerning the Ozone Transport Assessment Group (OTAG) is available on the web at http://www.epa.gov/ttn/otag/otag/index.html. If assistance is needed in accessing the system, call the help desk at (919) 541-5384 in Research Triangle Park, NC. The OTAG's technical data are located at http://www.iceis.mcnc.org/OTAGDC.

For Additional Information

For additional information related to air quality analysis, please contact Carey Jang, Office of Air Quality Planning and Standards; Emissions, Monitoring, and Analysis Division, MD-14, Research Triangle Park, NC 27711, telephone (919) 541-5638. For legal questions, please contact Howard Hoffman, Office of General Counsel, 401 M Street SW, MC-2344, Washington, DC, 20460, telephone (202) 260-5892. For questions regarding the NOx cap-and-trade program, please contact Sarah Dunham, Office of Atmospheric Programs, Acid Rain Division, MC-6204J, 401 M Street SW, Washington, DC 20460, telephone (202) 564-9087. For questions regarding regulatory cost analyses for electricity generating sources, please contact MaryJo Krolewski, Office of Atmospheric

Programs, Acid Rain Division, MC-6204J, 401 M Street SW, Washington, DC 20460, telephone (202) 564-9847. For questions regarding regulatory cost analyses for other stationary sources, please contact Larry Sorrels, Office of Air Quality Planning and Standards, Air Quality Strategies and Standards Division, MD-15, Research Triangle Park, NC 27711, telephone (919) 541-5041.

Outline

I. Background and Summary of Rulemaking

A. Summary of Rulemaking and Affected Sources

In August 1997, eight northeastern States (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Pennsylvania, and Vermont) submitted petitions to EPA under section 126 of the Clean Air Act (CAA) seeking to mitigate what they describe as significant transport of NOx, one of the main precursors of ozone. Each petition requests that EPA make a finding that certain major stationary sources or groups of sources in upwind States emit NOx emissions in violation of the CAA's prohibition on amounts of emissions that contribute significantly to ozone nonattainment or maintenance problems in the petitioning State. All the petitioning States directed their petitions to the 1-hour ozone standard. Originally, only three of the States (Massachusetts, Pennsylvania, and Vermont) also directed their petitions at the 8-hour ozone standard.

In notices dated September 30, 1998 and October 21, 1998, EPA proposed action on the petitions. The October notice of proposed rulemaking (NPR) is the longer, more detailed version of the proposal. In aggregate across all the petitions and for both ozone standards (to the extent a petition applied to both standards), EPA proposed to find that sources in 19 States and the District of Columbia are

significantly contributing to nonattainment problems in one or more of the petitioning States. The October NPR also proposed a Federal NOx budget trading program as the control remedy for sources that would be subject to any section 126 findings.

In the NPR, EPA proposed action under the 1-hour and 8-hour standards as specifically requested in each State's petition. At that time, the Maine and New Hampshire petitions were only directed at the 1-hour standard. On November 30, 1998, both Maine and New Hampshire requested that EPA also evaluate their August 1997 petitions under the 8-hour standard. These requests, in effect, constitute new petitions. In a supplemental notice of proposed rulemaking (SNPR) dated March 3, 1999 (64 FR 10342), EPA proposed action on the new Maine and New Hampshire 8-hour petitions. The SNPR did not affect any sources beyond those already affected by the NPR with respect to the Maine and New Hampshire 1-hour petitions and/or other petitions. The SNPR did not propose any additional control requirements beyond what were proposed in the NPR. The EPA is taking final action on both the NPR and the SNPR in this rule.

In today's action, EPA is making final affirmative technical determinations that certain major stationary sources and source categories identified in the section 126 petitions are significantly contributing to nonattainment

in, or interfering with maintenance by, one or more petitioning States with respect to one or both of the national ambient air quality standards for ozone (hereafter referred to as affirmative technical determinations). On the basis of these affirmative technical determinations, the petitions naming these sources and source categories will be finally granted (i.e, the section 126 findings will be deemed made) or denied at certain later dates pending certain actions by the States and EPA regarding State submittals in response to the final NOx SIP call. The schedule and conditions under which the applicable final findings on the petitions would be triggered are discussed below in Section I.E. The EPA's analysis of significant contribution is discussed in Section II below.

Under the 1-hour ozone standard, EPA is making final affirmative technical determinations as to a subset of sources or source categories named in the petitions from Connecticut, Massachusetts, New York, and Pennsylvania. The source categories for which EPA is making this affirmative technical determination of significant contribution are discussed in Section II. The States where these sources are located are listed in Table II-1.

The EPA is also partially denying the 1-hour petitions from Connecticut, Massachusetts, New York, and Pennsylvania, and fully denying the 1-hour petitions from Maine, New

Hampshire, and Rhode Island for on one of three reasons described below. First, for some sources or source categories in some States named in these petitions, EPA has information demonstrating these sources and States are not significantly contributing to nonattainment in the relevant petitioning State with respect to the 1-hour ozone standard. Second, for sources in some States EPA does not have adequate information to show that the sources do or do not significantly contribute (see Section III.A). Third, based on air quality monitoring data from 1996 through 1998, EPA believes preliminarily that certain areas in Maine, Massachusetts, New Hampshire, Pennsylvania, and Rhode Island have now achieved the 1-hour standard. Therefore, EPA is not making affirmative technical determinations of significant contribution for any upwind sources with respect to these areas (see Section II.F). The EPA is fully denying the 1-hour petition from Vermont because the 1-hour standard no longer applies in that State (See 63 FR 31014).

Five of the petitioning States, Maine, Massachusetts, New Hampshire, Pennsylvania, and Vermont, also directed their petitions at the new 8-hour ozone standard. Under the 8-hour ozone standard, EPA is making final affirmative technical determinations as to a subset of sources named in the petitions from Maine, Massachusetts, New Hampshire, and Pennsylvania. The source categories for which EPA is making

the affirmative technical determinations of significant contribution are the same as for the 1-hour standard and are discussed in Section II. The EPA is also denying portions of the petitions either because EPA has information demonstrating that some of the sources or source categories named in these petitions are not significantly contributing to nonattainment in the relevant petitioning State with respect to the 8-hour ozone standard or because EPA does not have adequate information to show that the sources are significantly contributing (see Section III.A). The EPA is denying the Vermont petition in full with respect to the 8-hour ozone standard because Vermont has no current 8-hour ozone nonattainment problems and no future projected nonattainment (i.e., maintenance) problems based on available analyses.

In aggregate for all petitions and both ozone standards, the sources and source categories for which EPA is making final affirmative determinations of significant contribution to nonattainment or interference with maintenance (hereafter simply significant contribution) with respect to one or more of the petitioning States are located in the following States: Alabama, Connecticut, Delaware, District of Columbia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee,

Virginia, and West Virginia.

Some of the sources that EPA is determining do not significantly contribute to the petitioning States are located in States that are affected by a separate rule on NOx transport, the NOx SIP call. Specifically, EPA is determining that sources in Georgia, South Carolina, and Wisconsin are not significantly contributing to any of the petitioning States that name those States. However, EPA has determined in the NOx SIP call that sources in these three States do significantly contribute to nonattainment problems in other downwind States. In acting on these section 126 petitions, EPA can only consider the impacts on downwind nonattainment problems in the petitioning States, which are all located in the Northeast. In the NOx SIP call, EPA considered impacts on nonattainment problems throughout the eastern half of the United States. Therefore, a determination that sources in certain States are not significantly contributing to any petitioning State for purposes of this action on the section 126 petitions does not alter EPA's conclusions on significant contribution with regard to other States under the NOx SIP call.

The section 126 petitions varied with regard to the control requirements they recommend for mitigating the interstate transport. While EPA considered the recommendations, section 126 does not limit EPA to the

recommended controls in determining an appropriate remedy. In Section II.J., EPA discusses the emissions limitations that would be necessary to ensure that the affected sources do not or would not emit in violation of the applicable statutory prohibition on significant contribution by upwind States to downwind air quality problems. The control remedy is based on the uniform application of highly cost-effective controls (as determined based on cost per ton of NOx reduced for each type of source). In selecting the control measures, EPA considered the recommendations made by OTAG on July 8, 1997 and the analyses for the NOx SIP call.

In today's action, EPA is establishing a section 126 control remedy for sources that would be subject to a future section 126 finding. The EPA intends to implement the control requirements through a Federal NOx cap-and-trade program. The EPA believes a trading program is the most cost-effective approach for achieving emissions reductions from large stationary sources. The EPA envisions that there would be an interstate trading program among section 126 sources, NOx SIP call sources in States that choose to participate in the interstate trading program administered by EPA, and sources subject to a Federal implementation plan under the NOx SIP call.

As discussed in Section IV below, EPA is today promulgating the general parameters of the remedy,

including, among others, the decision to implement a NOx cap-and-trade program as the control remedy, the control levels the trading program would be based on, the definition of the types of sources that would be subject to the trading program, and the compliance date. By July 15, 1999, EPA will finalize the details of the Federal NOx Budget Trading Program for the section 126 sources (as new 40 CFR part 97). The combined list of existing sources affected by an affirmative technical determination with respect to at least one petition, along with the more specific emissions limitations in the form of tradable allowance allocations, will be provided in the July notice of final rulemaking (NFR). The EPA intends to include new sources in the source categories that are significantly contributing with respect to the petitions from Connecticut, Maine, New Hampshire, New York, and Pennsylvania. The petition from Massachusetts does not cover new sources.

In accordance with section 126, sources must comply with the control requirements no later than 3 years from a final positive finding on the petitions. The EPA believes the full 3 years is necessary for compliance. As discussed below, the portions of the petitions for which EPA is making an affirmative technical determination could be deemed granted (the finding deemed made) on November 30, 1999 or May 1, 2000, depending on certain actions by States and EPA

regarding implementation plans required in response to the NOx SIP call. As discussed in Section III.C., both of these trigger dates would result in an emission reduction deadline of May 1, 2003.

B. Ozone Transport, Ozone Transport Commission NOx Memorandum of Understanding (OTC NOx MOU), OTAG, the NOx SIP Call, the Revised Ozone National Ambient Air Quality Standard (NAAQS), and Ozone Effects

Today's action occurs against a background of a major national effort, spanning more than 10 years, to analyze and take steps to mitigate the problem of the transport of ozone and its precursors across State boundaries. This effort has grown more intensive in the past several years with the approval of the OTC NOx MOU by 11 of the Northeastern States and the District of Columbia included in the Northeast Ozone Transport Region (OTR), the completion of the OTAG process (described below), and the promulgation of EPA's NOx SIP call. In addition, on July 18, 1997, EPA issued a revised NAAQS for ozone, which is determined over an 8-hour period (the 8-hour standard) (62 FR 38856). In establishing the 8-hour standard, EPA set the standard at 0.08 parts per million and defined the new standard as a "concentration-based" form, specifically the 3-year average of the annual 4th-highest daily maximum 8-hour ozone concentrations. This

has resulted in more areas and larger areas with monitoring data indicating nonattainment. Thus, it is even more important to implement regional control strategies to mitigate interstate pollution in order to assist downwind areas in achieving attainment. This new 8-hour standard must now be taken into account, along with the pre-existing 1-hour standard, in resolving transport issues. These issues and events are detailed in the proposed NOx SIP call (62 FR 60318). The 8-hour standard is intended to ultimately replace the 1-hour standard. However, the 1-hour standard will continue to apply to areas not yet in attainment to ensure an effective transition to the new 8-hour standard. In many areas of the country, the 1-hour standard has been revoked because the areas are attaining that standard (63 FR 31013; June 5, 1998 and 63 FR 39432; July 22, 1998). A State may petition under section 126 for both the 1-hour standard, to the extent that it still applies in the petitioning State, and the 8-hour standard.

The 1990 CAA set forth many requirements to address nonattainment of the 1-hour ozone NAAQS. Many States have found it difficult to demonstrate attainment of the NAAQS due to the widespread transport of ozone and its precursors. The Environmental Council of the States (ECOS) recommended formation of a national work group to allow for a thoughtful assessment and development of consensus solutions to the

problem. This work group, OTAG, was established 4 years ago to undertake an assessment of the regional transport problem in the eastern half of the United States. The OTAG was a collaborative process conducted by representatives from the affected States, EPA, and interested members of the public, including environmental groups and industry, to evaluate the ozone transport problem and develop solutions. The OTAG region included the 37 eastern-most States and the District of Columbia. Through the OTAG process, the States concluded that widespread NOx reductions are needed in order to enable areas to attain and maintain the ozone NAAQS. Based on information generated by OTAG and other available data, EPA determined that twenty-two States and the District of Columbia in the OTAG region are significantly contributing to nonattainment problems in downwind States. Therefore, EPA issued the NOx SIP call (63 FR 57356, October 27, 1998) requiring these jurisdictions to revise their SIPs to include NOx control measures to mitigate the ozone transport.

The EPA's response to the section 126 petitions differs from EPA's action in the NOx SIP call rulemaking in several ways. In the NOx SIP call, where EPA concluded that NOx emissions from a State are significantly contributing to nonattainment problems in downwind States, EPA is requiring the State to submit SIP provisions to prohibit an amount of

NOx emissions which represents the significant contribution. The State has the discretion to select the mix of control measures for their sources to meet the required statewide NOx emissions reductions. If the State does not make the required SIP submission, or submits an inadequate SIP, EPA is required to promulgate a Federal implementation plan (FIP) within 2 years of EPA's finding of the State failure. In the November 7, 1997 NOx SIP call proposal, EPA announced that it intended to expedite the FIP promulgation in order to assure that the downwind States receive the air quality benefits of regional NOx reductions as soon as practicable. Therefore, the EPA proposed FIPs for all the States affected by the NOx SIP call in conjunction with EPA's issuance of the final NOx SIP call (63 FR 56394).

By comparison, section 126 petitions are limited to addressing emissions from upwind stationary sources named in the petitions and not other sectors of the inventory. If EPA grants the petitions, it is EPA, not the States, that promulgates control requirements for the sources. The control remedy for sources named in the petitions that would be subject to future findings under section 126 is consistent with the control assumptions EPA used for these sources in determining the final statewide NOx budgets for States subject to the NOx SIP call. In addition, the Federal NOx Budget Trading Program that EPA intends to

promulgate in July for the section 126 sources is the same trading program that EPA proposed to use to achieve reductions from large electric generating units (EGUs) and large non-EGUs if it promulgates a FIP in any State. It is also the same trading program in which States can choose to participate to achieve the majority of the required emissions reductions under the NOx SIP call.

Because the NOx SIP call process and the section 126 petition process both address NOx transport in the eastern United States, EPA believes it is important to coordinate the two actions as much as possible. As discussed below in Section I.E., EPA and the petitioning States agreed to a proposed consent decree on the rulemaking schedule for the petitions that takes into consideration the NOx SIP call rulemaking. The court entered a slightly modified consent decree on October 26, 1998.

All of the States that submitted section 126 petitions are included in the OTR and participated in the OTAG process. In addition, all of the upwind sources identified in the petitions are located in the OTAG region. All eight petitions rely, in part, on the OTAG analyses for technical justification. The OTAG process concluded in June 1997 prior to the promulgation of the new 8-hour ozone standard and, therefore, the OTAG analyses focused on the 1-hour standard. All the petitions request relief under the 1-hour

standard. Five of the petitions also request relief under the new 8-hour standard. In acting on the section 126 petitions, EPA believes that it can only consider 8-hour nonattainment problems for the petitioning States that expressly requested relief under that standard. Under the NOx SIP call, EPA considered both 1-hour and 8-hour nonattainment problems throughout the OTAG region.

Ground-level ozone, the main harmful ingredient in smog, is produced in complex chemical reactions when its precursors, volatile organic compounds (VOCs) and NOx, react in the presence of sunlight. The chemical reactions that create ozone take place while the pollutants are being blown through the air by the wind, which means that ozone can be more severe many miles away from the source of emissions than it is at the source.

At ground level, ozone can cause a variety of ill effects to human health, crops and trees. Specifically, ground-level ozone induces the following health effects:

- Decreased lung function, primarily in children active outdoors,
- Increased respiratory symptoms, particularly in highly sensitive individuals,
- Hospital admissions and emergency room visits for respiratory causes, among children and adults with pre-existing respiratory disease such as asthma,

- Inflammation of the lung, and
- Possible long-term damage to the lungs.

The new 8-hour primary ambient air quality standard will provide increased protection to the public from these health effects.

Each year, ground-level ozone above background is also responsible for several hundred million dollars worth of agricultural crop yield loss. It is estimated that full compliance of the 8-hour ozone NAAQS will result in about $500 million of prevented crop yield loss. Ozone also causes noticeable foliar damage in many crops, trees, and ornamental plants (i.e., grass, flowers, shrubs, and trees) and causes reduced growth in plants. Studies indicate that current ambient levels of ozone are responsible for damage to forests and ecosystems (including habitat for native animal species).

C. Section 126

As discussed below in Section II.A., section 126 of the CAA authorizes a downwind State to petition EPA for a finding that major stationary sources or groups of sources upwind of the State emit in violation of the prohibition of section 110(a)(2)(D)(i) because, among other reasons, their emissions contribute significantly to nonattainment, or interfere with maintenance, of a NAAQS in the State. If EPA

grants the requested finding, the existing sources must shut down in 3 months unless EPA directly regulates the sources by establishing emissions limitations and a compliance period extending beyond 3 months but no later than 3 years from the finding.

D. Summary of Section 126 Petitions

As discussed in detail in the NPR, the petitions vary as to the type and geographic location of the source categories identified as significant contributors. All the petitions identified source categories; some petitions also provided lists of sources within the specified categories. The source categories include electric generating plants, fossil fuel-fired boilers and other indirect heat exchangers, and certain other related stationary sources that emit NOx. All the petitions target sources in the Midwest; some also target sources in the South and Northeast. The geographic area covered by each petition is shown in Figures F2-F9 of appendix F of part 52.

The petitions also vary as to the level of controls they recommend be applied to the sources to mitigate the transport problem. Several recommend EPA establish a 0.15 lb/mmBtu NOx emission limitation and several recommend that controls be implemented through a cap-and-trade program.

All of the petitions rely, in part, on OTAG analyses

for technical support. In addition, the States submitted a variety of other technical analyses which include computerized urban airshed modeling, wind trajectory analyses, results of a transport study by the Northeast States for Coordinated Air Use Management, and culpability analyses.

Table I-1 shows, by petitioner, the named source categories, the named geographic areas, and the requested remedy sought by the petitioning States. The named source categories are worded as they appear in the petitions. A map of the OTAG Subregions is provided in part 52, Appendix F, Figure 1, promulgated as part of this rule.

TABLE I-1. EPA's Summary of Section 126 Petitions

State	Named Source Categories	Named States	Requested Remedy
CT	Fossil fuel-fired boilers or other indirect heat exchangers with a maximum gross heat input rate of 250 mmBtu/hr or greater and electric utility generating facilities with a rated output of 15 MW or greater.	Sources in OTAG Subregions 2, 6, and 7 and portion of OTR extending west and south of CT. Includes all or parts of IN, KY, MI, NC, OH, TN, VA, WV. And OTR States DC, DE, MD, NJ, NY, PA.	Establish, at a minimum, emission limitations and a schedule of compliance consistent with the OTC NOx MOU[a], and a cap-and-trade program. Does not request remedy for OTR States because of OTC NOx MOU.

ME	Electric utilities and steam-generating units with a heat input capacity of 250 mmBtu/hr or greater.	Sources within 600 miles of Maine's ozone nonattainment areas. Includes all or parts of NC, OH, VA, WV, and OTR States CT, DE, DC, MD, MA, NJ, NY, NH, PA, RI, VT.	Establish compliance schedule and emissions limitation of 0.15 lb/mmBtu for electric utilities and the OTC NOx MOU level of control for steam generating units, in a multi-state cap-and-trade NOx market system.
MA	Electricity generating plants.	Sources in region within 3 counties on either side of the Ohio River in IN, KY, OH, WV.	Establish emissions limitation of 0.15 lb/mmBtu or 1.5 lb/MWh and a compliance schedule.
NH	Fossil fuel-fired indirect heat exchange combustion units and fossil fuel-fired electric generating facilities which emit ten tons of NOx or more per day.	Sources in OTR States and OTAG Subregions 1 through 7. Includes all or parts of IL, IN, IA, KY, MI, MO, NC, OH, TN, VA, WV, WI. Also OTR States CT, DE, DC, MD, MA, ME, NJ, NY, PA, RI, VT.	Establish compliance schedule and emission limitations no less stringent than: a) Phase III OTC NOx MOU reductions; and/or b) 85% reductions from projected 2007 baseline; and/or c) An emission rate of 0.15 lb/mmBtu.

NY	Fossil fuel-fired boilers or indirect heat exchangers with a maximum heat input rate of 250 mmBtu/hr or greater and electric utility generating facilities with a rated output of 15 MW or greater.	Sources in OTAG Subregions 2 6, and 7 and portion of OTR extending west and south of NY. Includes all or parts of IN, KY, MI, NC, OH, TN, VA, WV. And OTR States DC, DE, MD, NJ, PA.	Establish, at a minimum, emission limitations and a schedule of compliance consistent with the OTC NOx MOU, and a cap-and-trade program. Does not request remedy for OTR States because of OTC NOx MOU.
PA	Fossil fuel-fired indirect heat exchange combustion units with a maximum rated heat input capacity of 250 mmBtu/hr or greater, and fossil fuel-fired electric generating facilities rated at 15 MW or greater.	AL, AR, GA, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, OH, SC, TN, VA, WV, WI.	Establish emission limitations and a compliance schedule for a cap-and-trade program requiring: a) seasonal reductions of the less stringent of 55% from 1990 baseline levels, or 0.20 lb/mmBtu, beginning by May 1999; b) if necessary, seasonal reductions of the less stringent of 75% from 1990 baseline levels, or 0.15 lb/mmBtu, beginning by May 2003; c) such additional reductions as necessary beginning in 2005.

RI	Electricity generating plants.	Sources in region within 3 counties on either side of Ohio River in IN, KY, OH, WV.	Establish emissions limitation of 0.15 lb/mmBtu or 1.5 lb/MWh and a compliance schedule.
VT	Fossil fuel-fired electric utility generating facilities with a maximum gross heat input rate of 250 mmBtu/hr or greater and potentially other unidentified major sources.	Sources located within a geographic area extending 1000 miles southwest from Bennington, VT. Includes all or parts of IL, IN, KY, MI, NC, OH, TN, VA, WV. Also AL, GA, IA, MO, SC, WI. Also OTR States CT, DE, DC, MD, MA, NJ, NY, PA.	Establish emissions limitation of 0.15 lb/mmBtu or 1.5 lb/MWh and a compliance schedule. Does not request remedy for OTR States because of OTC NOx MOU.

[a]The OTC NOx MOU is an agreement among the States in the Ozone Transport Region to reduce ozone season NOx emissions from large utility and industrial combustion sources through implementation of a phased-in regionwide cap-and-trade program. It is described in detail in the NPR.

Section 126 allows States to petition EPA for a finding against sources and groups of sources that "emit" or "would emit" pollution in violation of the section 110(a)(2)(D) prohibition on emissions that significantly contribute to

nonattainment problems in the petitioning State. Thus, a finding could potentially apply not only to existing sources within a particular source category, but also to sources that would be built in the future. In the NPR, EPA stated it believed the section 126 petitions are ambiguous as to whether the requested findings are intended to include new sources. For the reasons discussed in the NPR, EPA proposed to interpret all eight section 126 petitions to encompass both existing and new sources. Therefore, if any final findings were triggered for source categories in a particular geographic area, new sources in those source categories locating in that area would also be subject to the section 126 control remedy. The EPA requested that if any of the petitioning States disagreed with this interpretation of its petition, the State submit clarifying comments on this issue. New York and New Hampshire submitted comments that EPA had correctly interpreted their petitions to cover both existing and new sources. The State of Massachusetts commented that it was not seeking a finding with respect to new sources. Therefore, in today's rule, the EPA is concluding that all of the petitions, except the petition from Massachusetts, cover both existing and new sources.

E. Litigation on Rulemaking Schedule

As discussed in the NPR, on February 25, 1998, the eight petitioning States filed a complaint in the U.S. District Court for the Southern District of New York to compel EPA to take action on the States' section 126 petitions. State of Connecticut v. Browner, No. 98-1376. The EPA and the eight States filed a proposed consent decree that would establish a schedule for EPA to act on the petitions. Pursuant to CAA section 113(g), the EPA solicited comments on the proposed consent decree, by notice dated March 5, 1998 (63 FR 10874). The comment period closed April 6, 1998. On August 21, 1998, after considering the comments received in the section 113(g) process, EPA requested the Court to enter a slightly modified version of the consent decree. The Court entered the slightly modified consent decree on October 26, 1998.

The schedule in the consent decree requires EPA to take final action on at least the technical merits of the petitions by April 30, 1999. The schedule requires the full disposition of the petitions by that date or an alternative final action by that date that would defer the granting or denial of the petitions to certain later dates extending to as late as May 1, 2000.

In formulating the consent decree, EPA developed the alternative approach to harmonize the section 126 and NOx SIP call actions. Specifically, paragraphs 5.b. and c.

state that:

> b. Unless EPA takes the final action described in paragraph 6, as to each individual petition, EPA's final action will be to --
>
> (I) Grant the requested finding, in whole or part; and/or
>
> (ii) Deny the petition, in whole or part.
>
> c. Unless EPA denies a petition in whole, its final action will include promulgation of a remedy under CAA section 126© for sources to the extent that a requested finding is granted with respect to those sources.

Then paragraph 6 states:

> 6. EPA shall be deemed to have complied with the requirements of paragraph 5(a) if it instead takes a final action by April 30, 1999, that --
>
> a. makes an affirmative determination concerning the technical components of the "contribute significantly to nonattainment" or "interfere with maintenance" tests under CAA section 110(a)(2)(D)(I), 42 U.S.C. section 7410(a)(2)(D)(I);
>
> b. further provides that:
>
> (I) If EPA does not issue a proposed approval of the relevant Upwind State's SIP revision (submitted in response to the NOx SIP call) by November 30, 1999, then the finding will be deemed to be granted as of November 30, 1999, without any further action by EPA;
>
> (ii) If EPA issues a proposed approval of said SIP revision by November 30, 1999, but does not issue a final approval of said SIP revision by May 1, 2000, then the finding will be deemed to be granted as of May 1, 2000, without any further action by EPA;
>
> (iii) If EPA issues a final approval of said SIP revision by May 1, 2000, EPA must take any and all further actions, if necessary to complete its action under section 126, no later than May 1, 2000; and
>
> c. Promulgates a remedy under CAA section 126© for sources to the extent that an affirmative determination is made with respect to those sources.

As discussed in the NPR, EPA believes that sources in

an upwind State should not be considered to be emitting an air pollutant in violation of the section 110 prohibition, and hence EPA should not grant a petition naming such sources, if the State is adhering to the NOx SIP call rule's schedule for submission of an approvable SIP revision, and EPA is acting speedily to approve the SIP -- or, failing that, if EPA has promulgated a FIP for the State. After all, if EPA's rule provides a particular path for the development of a plan calling on sources to reduce interstate pollution by May 1, 2003, and under that rule either the upwind State or EPA is moving forward to develop, take action on or promulgate a satisfactory plan meeting that rule and achieving attainment as expeditiously as practicable, it would be difficult to conclude that an affected source in the upwind State "emits or would emit in violation" of the prohibition that the plan is not yet required to contain.[1]

For these reasons, EPA is following the alternative

[1]Moreover there does appear to be tension between section 110(a)(2)(D), which does not establish the timing as to when the SIP prohibition needs to be effective against sources (i.e., when sources need to implement controls to reduce emissions) and the timing in section 126, which requires implementation no later than 3 years following a section 126(b) determination. The EPA does not believe that Congress intended section 126 to be used to shorten timeframes for action that EPA has previously determined are approvable for purposes of eliminating significant contribution to nonattainment areas in other States.

described in paragraph 6 of the consent decree. Thus, EPA is structuring its final action to contain: (1) a series of "technical determinations" as to which sources in which States named in the petitions would emit in violation of the section 110 prohibition if the State or EPA were to fall off track in putting a timely and satisfactory plan in place; (2) determinations that the petitions will automatically be deemed granted or denied on the basis of the events set forth in paragraph 6; and (3) the remedial requirements that will apply to the sources receiving affirmative technical determinations if a petition naming those sources is ultimately deemed granted.

The EPA received comments on the NPR that the section 126 petitions were inappropriately driving the timetable for submission of the SIPs required under the NOx SIP call; that is, that upwind States were not given adequate time to develop and submit their SIP revision, but that if they failed to do so on the mandated schedule, a section 126 finding would be deemed to be made. For the reasons discussed below, EPA does not believe that the link between the section 126 petitions and the NOx SIP call SIPs is inappropriate. Further, as stated in the final NOx SIP call, while EPA believes it is advantageous to coordinate the section 126 and NOx SIP call actions, EPA disagrees that this constrained EPA from being responsive to public

comments and considering alternative compliance dates.

F. Advance Notice of Proposed Rulemaking on Petitions

In accordance with the schedule in the then proposed consent decree, on April 30, 1998, EPA published in the Federal Register (63 FR 24058) an advance notice of proposed rulemaking (ANPR) on the section 126 petitions. The ANPR provided EPA's preliminary identification of source categories named in the petitions that emit NOx in amounts that significantly contribute to nonattainment problems in the petitioning States, provided EPA's preliminary assessment of the types of recommended emissions limitations and compliance schedules, provided EPA's preliminary assessment of the remedy the Agency would propose for approvable petitions, discussed legal and policy issues raised under section 126, and outlined the rulemaking schedule for the petitions. The ANPR solicited comment on all of the issues and preliminary assessments. The EPA received a number of comments on the ANPR from industry, States, and environmental groups. These comments covered the full spectrum of issues discussed in the ANPR and were carefully considered in the development of the section 126 NPR. The EPA indicated in the ANPR that it would respond to the ANPR comments, if any response were appropriate, when EPA responded to comments on the section 126 NPR.

The EPA established the informal comment period for the ANPR to solicit information that would be helpful in the deliberative process for the rulemaking proposal. The EPA appreciates the early, thoughtful input from the commenters. In the NPR, EPA noted that its proposed positions superseded the preliminary positions taken in the ANPR. The majority of commenters on the ANPR submitted new comments on the NPR to specifically address EPA's detailed proposal. The EPA has responded to all significant comments on the proposal either in this preamble or in the Response to Comments document that accompanies this rulemaking.

G. Comment Periods and Availability of Key Information

The EPA provided a 60-day comment period on the NPR and a 40-day comment period on the SNPR. As discussed below, in response to commenter's requests, EPA reopened the NPR comment period on two occasions, to take further comment on source-specific emissions inventory data and on the impacts of the proposed revocations of the 1-hour standard on the section 126 rulemaking. Some commenters requested that the NPR comment period be extended on all issues. The very limited amount of time allowed in the consent decree between the deadline for the proposed rule and the deadline for the final rule constrained EPA from providing longer comment periods for every issue. However, EPA received a number of

comments after the close of the comment periods which EPA considered in developing the final rule.

Commenters representing the interests of upwind sources and States stated that they had not been given a meaningful opportunity to comment on various aspects of today's rulemaking, either because important documents had not been made available to them, or because, in the commenters' view, EPA has not been open-minded to the perspective of the upwind sources and States. For the reasons described in the Response to Comments document, EPA believes that the appropriate information was timely made available to the public, and that EPA has been open-minded to the views of, and has carefully reviewed the comments of, all commenters concerning today's rulemaking.

The major issues raised in the comments are responded to throughout the preamble of this final rule. A comprehensive summary of all other significant comments, along with EPA's response, is provided in the Response to Comments document, that has been placed in the docket for this rulemaking (Docket No. A-97-43).

1. Emissions Inventory Corrections

By notice dated January 13, 1999 (64 FR 2416), EPA reopened the comment period on source-specific emission inventory data. This comment period was established in

conjunction with the extended period for the public to submit emissions inventory revisions for the purpose of the NOx SIP call. The EPA received numerous requests to allow more time to submit revisions to the source-specific data used to establish each State's base inventory and budget in the NOx SIP call. By notice dated December 24, 1998, (63 FR 71220), EPA extended the opportunity for submitting emission inventory corrections for the NOx SIP call until February 22, 1999. Because the section 126 action and the NOx SIP call rely on the same emissions inventory information, EPA extended the comment period for the section 126 action as well. The EPA committed to revise the emissions inventory to reflect the new data, as appropriate, by the end of April 1999. The EPA will use the revised inventory in identifying the individual sources subject to today's affirmative technical determinations and in assigning their NOx allowance allocations for purposes of the Federal NOx Budget Trading Program. This information will be provided in the July notice of final rulemaking.

2. Impacts of 1-Hour Standard Revocation

By notice dated March 2, 1999 (64 FR 10118), EPA reopened the NPR comment period to allow comment on how the proposed section 126 action may be affected by a separate proposed action by EPA (63 FR 69598, December 17, 1998) to

revoke the 1-hour ozone standard for certain areas in States that had submitted section 126 petitions. The affected areas are Boston-Lawrence-Worcester, Massachusetts-New Hampshire; Portland, Maine; Portsmouth-Dover-Rochester, New Hampshire; and Providence, Rhode Island. The comment period was reopened in response to two requests. In that notice, EPA indicated its position that if EPA promulgates a final determination that the 1-hour standard no longer applies for those designated nonattainment areas, the contributions from sources in upwind States to those areas would no longer constitute a basis for EPA to approve the petitioning States' requested findings as to the 1-hour standard for those areas. The EPA is finalizing action on the revocation notice in the same timeframe as today's final action. In addition, EPA is in the process of proposing to revoke the 1-hour standard in another area in one of the petitioning States, Pittsburgh, Pennsylvania, because the area has achieved clean air based on 1996-1998 monitoring data. In today's rulemaking, EPA confirms its position that the areas in the petitioning States for which EPA is revoking the 1-hour standard no longer provide a basis for EPA to make positive findings under section 126 for the 1-hour standard.

3. Timing of Petition for Review

Commenters stated that if EPA takes action to approve

the technical merits of a section 126 petition by April 30, 1999, but findings on the petitions are not deemed made until some later date, then the April 30 action should be deemed “final action” reviewable by a court of law regardless of the fact that EPA would not be making findings on the petitions until some later date.

Section 307(b) of the CAA identifies which court has venue to hear a petition for review of final agency action and the timing by which any such petition must be filed. For the reasons described in section VI of this preamble, EPA is determining that final action regarding the section 126 petitions is nationally applicable and of nationwide scope or effect for purposes of section 307(b)(1). Therefore, venue lies with the U.S. Court of Appeals for the D.C. Circuit. With respect to timing, section 307(b)(1) generally provides that any petition for review must be filed within sixty days of publication of agency final action in the Federal Register. Whether a petition to review the decisions in this rule would be properly reviewable at this time by the Court of Appeals is a question to be addressed and decided by the court, not EPA.

H. Summary of Major Changes Between Proposals and Final Rule

This summary describes the major changes that have

occurred since publication of the NPR and SNPR.

Section 126 Control Remedy

In the NPR, EPA proposed to implement as the section 126 remedy a new Federal NOx Budget Trading Program. That program would consist of a capped, market-based trading system applicable to all sources for which a final affirmative finding is ultimately granted. The Agency intended to finalize all aspects of the section 126 remedy by April 30, 1999. In today's notice, EPA finalizes the general parameters of the remedy--including the decision to implement a capped, market-based trading program, identification of the sources subject to the program, specification of the basis for the total tonnage cap, and specification of the compliance date. The details of the trading program, including unit-by-unit allocations, will be finalized in a separate action no later than July 15, 1999. As part of today's action, the EPA is also establishing interim final emissions limitations that will be imposed in the event a finding under section 126 is made and the Administrator does not promulgate the Federal NOx Budget Trading Program regulations before such finding.

1-Hour Standard Attainment

In the section 126 NPR, EPA proposed which upwind States contain sources of emissions named in the petitions that contribute significantly to nonattainment problems in

the petitioning States under the 1-hour ozone standard, and where petitions were based on it, the 8-hour ozone standard.

After publication of the section 126 NPR on October 21, 1998, EPA preliminarily determined that proposed to determine that the 1-hour ozone standard no longer applied to certain nonattainment areas, including several areas in the petitioning States based on 1996-1998 air quality monitoring data. These areas, however, continue to monitor violations of the 8-hour standard.

Because EPA believes, preliminarily, that these areas no longer have 1-hour nonattainment problems based on the 1996-1998 data, they can no longer provide a basis for EPA to make affirmative findings under section 126 that upwind sources are significantly contributing to nonattainment with respect to the 1-hour standard. Therefore, EPA is denying portions of the 1-hour petitions related to these areas. The determination to delete these areas as 1-hour receptor areas has no impact on the determinations of which sources are significantly contributing to downwind nonattainment.

Maine's 8-Hour Petition and North Carolina Sources

In the section 126 NPR, the upwind States that were named by the petitioners and which were proposed to contain sources that make a significant contribution to 8-hour nonattainment problems in the petitioning States were based on the upwind-downwind linkages found to be significant in

the NOx SIP call. The exception to this in today's rule is Maine's petition for relief from emissions sources in North Carolina. In its petition, Maine requested relief from large stationary sources within a 600-mile radius of the southwestern-most nonattainment area in Maine. This radius includes several counties in the extreme northeastern portion of North Carolina that do not contain sources of the type and size identified in Maine's petition. Thus, even though EPA found in the NOx SIP call that emissions in North Carolina contribute significantly to 8-hour nonattainment in Maine, EPA is denying Maine's petition relative to North Carolina because there are no section 126 sources located in the portion of North Carolina covered by Maine's petition.

II. EPA's Analytical Approach

The EPA described its analytical approach in the NPR, (63 FR 56299). The EPA received numerous comments on various aspects of its approach. After considering these comments, EPA has determined to maintain the principal elements of its approach. The major comments are summarized below.

A. EPA's Interpretation of Section 126: Authorization of the Petitions

This section lays out EPA's legal interpretation of sections 126 and 110(a)(2)(D), the key statutory provisions

that authorize today's action. First, EPA describes how these provisions authorize EPA to address interstate transport problems and how they relate to sections 176A and 184, which are the other two main interstate transport provisions under the Act. Second, EPA explains its interpretation that the reference in section 126 to section 110(a)(2)(D)(ii) is a scrivener's error and the correct reference is to section 110(a)(2)(D)(I). Third, EPA discusses its interpretation of the phrase "emits in violation of the prohibition" of section 110 and explains how this interpretation provides direction for coordinating EPA's actions on the section 126 petitions and the NOx SIP call.

1. Relationship Among Sections 110(a)(2)(D), 126, and 176A/184

Subsection (a) of section 126 requires, among other things, that SIPs require major proposed new (or modified) stationary sources to notify nearby States for which the air pollution levels may be affected by the fact that such sources have been permitted to commence construction. Subsection (b) provides:

> Any State or political subdivision may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the

> prohibition of section 110(a)(2)(D)(ii) . . . or this section.

Subsection (c) of section 126 states that –

> [I]t shall be a violation of this section and the applicable implementation plan in such State [in which the source is located or intends to locate]--
>
> (1) for any major proposed new (or modified) source with respect to which a finding has been made under subsection (b) of this section to be constructed or to operate in violation of the prohibition of section 110(a)(2)(D)(ii) . . . or this section, or
>
> (2) for any major existing source to operate more than three months after such finding has been made with respect to it.

However, subsection (c) further provides that EPA may permit the continued operation of such major existing sources beyond the 3-month period, if such sources comply with EPA-promulgated emissions limits within 3 years of the date of the finding.

Section 110(a)(2)(D) provides the requirement that a SIP contain adequate provisions –

> (I) prohibiting, consistent with the provisions of this title, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will--
>
> (I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to [any] national . . . ambient air quality standard, or
>
> (II) interfere with measures required to be

> included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility.
> (ii) insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement)
> . . .

In the 1990 Clean Air Act Amendments, Congress added section 184, which delineates a multistate ozone transport region (OTR) in the Northeast, requires specific additional controls for all areas (not only nonattainment areas) in that region, and establishes the Ozone Transport Commission (OTC) for the purpose of recommending to EPA regionwide controls affecting all areas in that region. At the same time, Congress added section 176A, which authorizes the formation of transport regions for other pollutants and in other parts of the country.

In the NPR, EPA proposed the view that, with respect to existing stationary sources, sections 126(b)-(c) and 110(a)(2)(D), read together, authorize a downwind State to petition EPA for a finding that major stationary sources or groups of sources upwind of the State emit in violation of the prohibition of section 110(a)(2)(D)(I) because, among other reasons, their emissions contribute significantly to nonattainment, or interfere with maintenance, of a NAAQS in the State. If EPA grants the requested finding, the existing sources must shut down in 3 months unless EPA

directly regulates the sources by establishing emissions limitations and a compliance period extending beyond 3 months but no later than 3 years from the finding. In accordance with section 302(j) of the CAA, the term major stationary source means "any stationary facility or source which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant...." For the purpose of this rulemaking the relevant pollutant is NOx emissions.

The EPA received numerous comments arguing that section 126(b) should not be read to authorize the petitions, which ask EPA to implement controls on upwind sources on grounds that, under section 110(a)(2)(D), they contribute significantly to nonattainment problems downwind. According to these commenters, Congress, in the 1990 Clean Air Act Amendments, dealt with interstate ozone transport by establishing sections 176A and 184 as the key provisions, and revising section 110(a)(2)(D) to assure that it did not apply outside the context of section 184.

For the reasons discussed below, EPA believes that following the 1990 Clean Air Act Amendments, section 126(b) and 110(a)(2)(D) retain independent effect and authorize the petitions. Please note that the discussion below assumes that the references in section 126 to section

110(a)(2)(D)(**ii**) are a scrivener's error and instead should be read to refer to section 110(a)(2)(D)(**I**). See section II.A.2. below for further explanation of the error.

Background: The CAA, as amended in 1990, has four key provisions that relate to the issue of interstate transport of air pollution and air pollution precursors: sections 110(a)(2)(D), 126, 176A, and 184. In attempting to resolve disputes over specific interpretations of these provisions, it makes sense to consider these provisions together as the set of statutory requirements that carry out Congress' desired approach to the problem of interstate transport. The provisions should be read in a manner that will best bring meaning to each provision and allow it to fit rationally into the overall statutory context.

A stated purpose of the CAA is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." CAA, section 101(b)(1). To understand how the interstate transport provisions interact with one another and fit into the CAA's overall scheme to achieve its clean air purposes, it is useful to step back and consider how these provisions came into being in their current forms. Relevant information includes earlier draft and adopted versions of the provisions themselves, statements by

Congress regarding the provisions, and judicial rulings on EPA interpretations of the provisions. It is also useful to recognize the larger factual context in which Congress was operating while developing these provisions, both in terms of the current understandings of the environmental problems that Congress was attempting to remedy and of the political context for Congressional action. The relevant legislative history is largely that of the 1970, 1977 and 1990 CAA Amendments, although the pre-1970 provisions are useful to indicate the approach that Congress rejected in adopting the first version of the current section 110(a)(2)(D).

As with most environmental policy issues, our understanding of the problem of interstate transport of pollutants and pollution precursors, our ability to measure it, and the legal means employed to address it have become increasingly sophisticated over time. Prior to the adoption of the 1970 CAA, conflicts between states over air pollution most frequently concerned the relatively local air quality effects inflicted on inhabitants of one state by a facility located on the other side of the state border. The 1970 CAA contained an interstate pollution provision that could potentially have been applied to long distance transport disputes, but those did not appear to be Congress' main concern. *See* S. Comm. on Public Works, National Air Quality

Standards Act of 1970, S. Rep. No. 91-1196, 91st Cong., 2d Sess., 13 (1970) *reprinted in* 1 Committee on Public Works, 93d Cong., 2d Sess., A Legislative History of the Clean Air Act Amendments of 1970, 413 (1974) (hereinafter 1970 Legislative History). By the time Congress passed the 1977 Amendments, however, both the federal and state governments and the general public had become increasingly aware that a significant portion of certain air pollution problems in some states likely derived from activities in other states, including more distant states. In fact, the provisions of the 1970 CAA, as implemented, had exacerbated long-range interstate transport problems by implicitly encouraging dispersion through tall smoke stacks as a remedy for local air quality problems. By 1990, our increasing awareness of the long-range transport problem was bolstered by more sophisticated measurement and modeling techniques.

As understanding of the problem became more sophisticated over time, so did Congress' approach to ameliorating the problem. From 1970 to 1990, Congress steadily increased the number and power of the tools available to both EPA and the states to address interstate pollution transport. This expansion of authority under the CAA was driven by an ongoing situation in which increased recognition of the problem was accompanied by no actual

reduction in transport over a 20-year period. In fact, the set of actions comprised by the NOx SIP call and the proposed FIP is EPA's first significant attempt to require reduction of interstate transport of pollutants. While certain downwind states affected by the problem have made serious attempts to impel reductions by upwind states, none of these attempts has been effective to date. This factual context, both in terms of the extent of the effects of interstate pollutant transport on downwind states' citizens' health, environments, and economies, and in terms of the continued failure of the federal or state governments to have any direct effect on the problem, is critical to understanding Congress' intent in adopting the 1990 CAA provisions on interstate transport.

In addressing interstate pollution transport, there are several central issues with which Congress has had to grapple. In its simplest form, interstate transport raises questions of how to provide recourse for a state experiencing health or welfare impacts from sources beyond the state's control. To the extent that we have decided that there are certain minimum national standards for air pollutants that must be met to protect health and welfare, this first issue is a matter of creating a mechanism for the downwind state to impel emission reductions in the upwind

state. The issue becomes more complicated in the more common situation where both the upwind and downwind states contribute pollutants causing the exceedance of the national standards. This situation adds the need to allocate responsibility (and therefore cost) for making the reductions necessary to meet the standards, which involves both economic and equity aspects. Where the air in the downwind area is cleaner than the standards require, it also raises the issue of the extent to which the downwind state can "reserve" its cleaner air either for environmental purposes or to provide a margin for future economic growth. All of these questions are further complicated where there are multiple upwind and downwind states contributing to and experiencing an air pollution problem. With each of these situations, there is also the continuing question of the extent to which these issues should be resolved by the states involved and the extent to which solutions may or must be imposed by the federal government.

Pre-1970 Provisions: The Clean Air Act of 1963 and the Air Quality Act of 1967 both included provisions to address interstate air pollution, but neither had much effect on the problem. *See generally,* Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392, (1963); Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485 (1967). These early statutes generally

provided for far less of a federal role in pollution control than the 1970 CAA. On interstate pollution, they took the approach that it was an issue between states, and hence that states needed to cooperate to develop a solution. *See* Vickie L. Patton, The New Air Quality Standards, Regional Haze, and Interstate Air Pollution Transport, 28 Envtl. L. Rep. 10155, 10157-10160 (1998); Geoffrey L. Wilcox, New England and the Challenge of Interstate Ozone Pollution Under the Clean Air Act of 1990, 24 Boston College Envtl. Affairs L. Rev. 1, 13-14 (1996). The federal government would facilitate such cooperation, but would not force it and would rarely step in to impose a solution in the absence of state resolution. Over time, as the approach of state cooperation has consistently failed to produce reductions from upwind states, Congress has given more authority to the federal government to break the deadlock between upwind and downwind states, although a strong political and policy interest in letting states solve state problems has produced continued attempts at driving consensus solutions.

The CAA of 1963 provided that either a downwind state or Department of Health, Education, and Welfare (HEW) could convene an intergovernmental conference on a particular interstate pollution issue. §5(c)(1)(A), (c)(1)(C), 77 Stat. at 396. The conference would make findings, and HEW

could recommend on that basis that the upwind state take certain actions to reduce emissions. §5(d), 77 Stat. at 397. If the upwind state failed to act, HEW could hold a public hearing to decide whether to recommend abatement measures again. §5(e), 77 Stat. at 397. Finally, if the upwind state failed again to implement the recommended measures, HEW could refer the issue to the U.S. Attorney General who could bring an enforcement action. §5(f), 77 Stat. at 397-398. While they produced progress on a few interstate pollution problems, the provisions were generally criticized as ineffectual, particularly due to the long burdensome process required before the upwind state could be forced to act. Patton, *supra* at 10157. The Air Quality Act of 1967 added a regional air quality planning approach, which was appropriate for addressing interstate pollution issues, but still lacked a mechanism to force action. *See* Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485 (1967).

1970 Clean Air Act: In the face of a widespread lack of progress addressing the nation's air pollution problems, Congress significantly changed its approach in adopting the 1970 CAA. Congress moved from a decentralized approach dependent on state action to a cooperative federalism approach, with uniform minimum standards and federal

authority to step in where the states failed to act. In the 1970 CAA, in then section 110(a)(2)(E), Congress first adopted language embodying the concept that sources located in one state should not be allowed to interfere with attainment or maintenance of a NAAQS in another state. *See* Clean Air Act Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676. EPA was to approve a state implementation plan if, among other requirements, "it contains adequate provisions for intergovernmental cooperation, including measures necessary to insure that emissions of air pollutants from sources located in any air quality control region will not interfere with the attainment or maintenance of such primary or secondary standard in any portion of such region outside of such State or in any other air quality control region." Pub. L. No. 91-604 § 110(a)(2)(E). While the final statutory language and the Senate Committee Report (discussing almost identical language) emphasized intergovernmental cooperation as the mechanism, the intent was that states develop air quality programs that "at the minimum must prevent facilities in one State from contributing to the violation of ambient air quality standards in an adjacent State . . . ." S. Rept. No. 91-1196 at 13, *reprinted in* 1970 Legislative History at 413. Although the statutory language was sufficiently broad to

encompass the long-range transport issues that have emerged as the more difficult problem, it appears that Congress initially conceptualized the problem as more of a short-range transport issue, with pollution from a facility on one side of a state border affecting a community on the other side.[2]

The EPA implemented sections 110(a)(2)(E) of the 1970 CAA through regulations focusing on information exchange rather than requirements to control emissions. Patton, *supra,* at 10162; Wilcox, *supra,* at 15-16. The regulations required only that the SIP assure that the state will transmit information to other states regarding factors, such as construction of new plants, that may significantly affect air quality in the same or adjoining air quality regions. 40

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[2]*See, e.g.*, H.R. 17255, which would have amended section 108(c) of the CAA to provide that state plans should contain "adequate provisions for intergovernmental cooperation, including, in the case of any area covering part or all of more than one State and designated as an air quality control region . . . appropriate provisions for dealing with interstate air pollution problems, . . . " (limiting the interstate pollution provisions to states that are part of a single air quality control region). H.R. 17255, 91st Cong., 2d Sess. §4(a)(1) (1970), *reprinted in* 2 1970 Legislative History at 914. Note also that most of the abatement conferences held at that time, which addressed the more contentious interstate air pollution issues, concerned conflicts between adjacent states. *See* Air Pollution–1970: Hearings Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works, 91st Cong., 2d Sess. (March 17, 1990), *reprinted in* 2 1970 Legislative History at 1098-1103.

C.F.R. § 51.21(c) (1977) (superseded). In a challenge by NRDC, the Eighth Circuit upheld the regulations as a "legitimate means to attain 'intergovernmental cooperation' as contemplated by Congress in the statute." Wilcox, *supra,* at 15, *quoting NRDC v. EPA*, 483 F.2d 690, 692 (8th Cir. 1973). The result of EPA's approach was that the states made virtually no progress on control of interstate pollution under the 1970 Act. *See* Patton, *supra,* at 10161, 19; Wilcox, *supra,* at 18; S. Comm. on Envt. and Public Works, Clean Air Act Amendments of 1977, S. Rept. 95-127, 95th Cong., 1st, Sess. 41 (1977), *reprinted in* S. Comm. on Envt. and Public Works, 95th Cong. 2d. Sess., 3 A Legislative History of the Clean Air Act Amendments of 1977, 1415 (1978) (hereinafter 1977 Legislative History)(noting that the 1970 Act failed to specify any abatement procedure if a source in one state emitted air pollutants that adversely affected another state, and "[a]s a result, no interstate enforcement actions have taken place, resulting in serious inequities among several States, where one State may have more stringent implementation plan requirements than another State.").

1977 Clean Air Act: In developing the 1977 Amendments to the CAA, both Houses of Congress focused on interstate pollution as a major area of concern, and the 1977

Amendments made significant changes to the statute intended to address the problem. *See* S. Rept. 95-127 at 41, *reprinted in* 3 1977 Legislative History at 1415. The Report of the House Committee on Interstate and Foreign Commerce provided an extensive discussion of the interstate pollution problem, a portion of which ran as follows:

> In the committee's view, however, the existing law (as interpreted by the Administrator) is an inadequate answer to the problem of interstate air pollution. This is so for five basic reasons. First, an information exchange without adequate procedures to act on that information is simply insufficient. Second, an effective interstate air pollution control program must include not only prevention of interstate air pollution from new sources but also abatement of pollution from existing sources. Third, an effective program must also be designed to prevent significant deterioration . . . of air quality and to protect visibility under section 116 of the bill from interstate air pollution. Fourth, an effective program must not rely on prevention or abatement action by the State in which the source of the pollution is located, but rather by the State . . . which receives the pollution and the harm, and thus which has the incentive and need to act.

> Fifth, an effective program must include a Federal mechanism for resolving disputes which cannot be decided through cooperation and consultation between the States or persons involved. . . . The problem of interstate air pollution remains a serious one that requires a better solution . . . .

H. Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess., Clean Air Act Amendments of 1977, H. Rept. 95-294, 330 (1977) *reprinted in* 4 1977 Legislative History at 2797.

The Senate Committee on the Environment and Public Works also viewed the 1970 provisions as inadequate, particularly in their failure to "specify any abatement procedure" if a source in one state emitted air pollutants that "adversely affected the air quality control efforts of another State." S. Rept. 95-127 at 41 *reprinted in* 3 1977 Legislative History at 1415. The Committee noted that ""[a]s a result, no interstate enforcement actions have taken place, resulting in serious inequities among several States, where one State may have more stringent implementation plan requirements than another State." *Id.* This put plants in the states with more stringent control measures "at a distinct economic and competitive disadvantage." *Id.* at 42, 1416. The revisions were "intended to equalize the positions of the States with

respect to interstate pollution by making a source at least as responsible for polluting another State as it would be for polluting its own State." *Id.*

To address the interstate pollution problem, the 1977 Amendments modified section 110(a)(2)(E) and added a new section 126. *See* Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685. The House Committee Report discussed how these provisions together incorporated "the five elements for an effective program for control of interstate pollution." H. Rept. 95-294 at 330, *reprinted in* 4 1977 Legislative History at 2797. The most critical strengthening elements were a direct requirement that SIPs prohibit emissions in amounts that would prevent attainment or maintenance by any other state of a NAAQS, and a mechanism for downwind states to petition EPA to bar emissions from any major source in violation of that prohibition. The revised section 110(a)(2)(E) required SIPs to contain:

> adequate provisions (i) prohibiting any stationary source within the State from emitting any air pollutant in amounts which will (I) prevent attainment or maintenance by any other State of any such national primary or secondary ambient air quality standard, or (II) interfere with measures required to be included in

the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility, and (ii) insuring compliance with the requirements of section 126, relating to interstate pollution abatement.

Pub. L. No. 95-95. While overall this made the SIP requirements for interstate pollution more stringent, the provision was limited to emissions from stationary sources, and Congress later removed this limitation in the 1990 Amendments.

The new section 126 included both notification requirements and a petition process. First, each SIP had to require notice to all nearby States in which the air pollution levels might be affected of each major existing or proposed new source that "may significantly contribute to levels of air pollution in excess of the national ambient air quality standards in any air quality control region outside the State." Pub. L. No. 95-95. Second, section 126 provided that a state could petition EPA for a finding that any new or existing "major source emits or would emit any air pollutant in violation of the prohibition of section 110(a)(2)(E)." Pub. L. No. 95-95. EPA had to act on the petition within 60 days, and if EPA made the finding, it would be a violation of the SIP for the source either to be

constructed or operate in violation of section 110(a)(2)(E) or for the source to operate for more than three months after the finding. The EPA could allow the source to continue to operate beyond that period if it complied with "such emission limitations and compliance schedules" set by EPA "to bring about compliance with ... section 110(a)(2)(E) as expeditiously as practicable," but the source would have to comply by three years from the date of the finding, at the latest. Pub. L. No. 95-95.

Congress made clear that it intended section 126 to provide an additional means of attacking interstate pollution that would supplement, not replace, the SIP requirement under section 110(a)(2)(e).

> This petition process is intended to expedite, not delay, resolution of interstate pollution conflicts. Thus, it should not be viewed as an administrative remedy which must be exhausted prior to bringing suit under section 304 of the act. Rather, the committee intends to create a second and entirely alternative method and basis for preventing and abating interstate pollution. The existing provision prohibiting any stationary source from causing or contributing to air pollution which interferes with timely attainment or maintenance or [sic] a national ambient air standard

(or a prevention of significant deteriorating [sic] or visibility protection plan) in another State is retained. A new provision prohibiting any source from emitting any pollutant after the Administrator has made the requisite finding and granted the petition is an independent basis for controlling interstate air pollution.

H. Rep. 95-294 at 331, *reprinted in* 4 1977 Legislative History at 2798.

A commentator summarizes the significance of and inter-relationship between these two provisions in the following manner:

New section 126 had several remarkable features. Importantly, it enabled downwind states to initiate action against interstate pollution. While section 126 required upwind states to identify sources potentially contributing to interstate pollution thereby informing potential petitions, the petitions themselves were not dependent on the cooperation of the upwind state. States suffering from interstate pollution could independently obtain information and petition EPA for abatement action.

Section 126 also provided a powerful federal remedial

tool. It authorized direct, expeditious federal abatement of pollution. Additionally, it allowed objection to and corresponding remediation of transported pollution at any time, not just when EPA was reviewing an upwind state plan for compliance with the transport prohibition.

The petition process together with the SIP prohibition on transport provided reinforcing checks on interstate transport. The section 110 provisions restricted the source state from adopting, and prohibited EPA from approving, state plans allowing interstate air pollution. Section 126 provided a backstop in the event prohibited pollution nevertheless occurred. It created a formal process for downwind states to enforce the section 110 prohibition by bringing interstate pollution concerns to EPA's attention and thereby enabling injured states to safeguard their interests. Patton, *supra,* at 10165-10166.

Despite Congress' provision of significantly improved tools to address interstate pollution, in implementing these 1977 CAA provisions EPA did not require reduction of interstate pollution. While EPA has received a number of

petitions under section 126, it has granted none of them prior to this action. Nor had the Agency found a SIP inadequate on the basis of interstate transport, until the OTC LEV SIP call. *See* 60 FR 4712(January 24, 1995). *See* Patton, *supra,* 10166-10172; Wilcox, *supra,* at 21-27 for detailed discussion of EPA's rejection of downwind states' efforts to obtain relief under these provisions.

Clean Air Act Amendments of 1990: Congress adopted the CAA Amendments of 1990 in the context of our continued failure to make significant progress on several air pollution fronts, including tropospheric ozone and acid rain, both of which are caused at least in part by interstate transport of pollutants. *See* Lieberman, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* S. Comm. on Envt. and Public Works, I A Legislative History of the Clean Air Act Amendments of 1990, 103d Cong., 1st Sess., 1055 (1993) (hereinafter 1990 Legislative History) ("In the years since the Clean Air Act was amended–back in 1977–the air has become dirtier and more dangerous. Our uphill climb against the ravages of pollution has turned into a downhill fall, and only now are we realizing the real impact of our failure to act."). By 1990, there was also a greater awareness that problems such as ozone pollution of the eastern U.S. were unlikely ever to be successfully addressed

without controlling interstate pollution transport. As stated in the Senate Committee Report, "[a]reas in some States may be unable to attain the ozone standard despite implementation of stringent emissions control because of pollution transported into such areas from other States....The transport problem in the northeast, and perhaps other regions as well, is serious enough that additional efforts must be made on an interstate basis to control emissions, including emissions from attainment areas." S. Comm. on Env't and Public Works, Clean Air Act Amendments of 1989, S. Rep. 101-228, 101st Cong., 1st Sess., 48 (1989) *reprinted in* V 1990 Legislative History at 8388. *See also* Lautenberg, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/26/90, *reprinted in* I 1990 Legislative History at 1106 ("In New Jersey, the Department of Environmental Protection says that on some days even if we shut down the entire State, we would be in violation of some health standards because of pollution coming over from other states."); S. Rep. 101-228, 101st Cong., 1st Sess. at 49 (1989), *reprinted in* V 1990 Legislative History at 8389 ("The model suggests that even if all emissions sources were eliminated within the tri-state area [New York, New Jersey and Connecticut], violations of the ozone standard would still occur. This means substantial reductions in emissions

from areas upwind from the New York metropolitan area must be achieved if this area is to attain the air quality standards.").

The CAA Amendments of 1990 are widely viewed as one of the most detailed, complex, and prescriptive pieces of environmental legislation yet adopted. See Wilcox, *supra,* at 27. In light of EPA's lack of progress on several major air pollution problems under the 1977 provisions, including interstate pollution, Congress responded by strengthening existing federal tools and adding new ones that could be used to achieve emissions reductions, and by establishing numerous new mandates and deadlines to force action by states and EPA. *See, e.g.*, sections 169B, 172, 174, 175A, 176, 176A, 179, 181, 182, 183, 184, 185, 186, 187, 188, 191, 192, and 401-416. *See also*, Lieberman, Senate Debate on S. 1630, 1/31/90, *reprinted in* IV 1990 Legislative History at 5077 ("Indeed, it is in part the lack of support of EPA which in the past has prevented the effort to institute regional controls from being successful."). The provisions that were either new or strengthened included several targeting interstate pollution -- the acid rain provisions, the regional haze provisions, the eastern ozone transport commission provisions, and general provisions for interstate transport. Congress strengthened the existing interstate

pollution transport provisions in sections 110(a)(2)(D) (the successor to section 110(a)(2)(E)) and 126, and added two new interstate pollution provisions in sections 176A and 184. See H. Debate, 5/21/90, Clean Air Facts, *reprinted in* II 1990 Legislative History at 2558 ("Stronger interstate transport provisions.–The Swift/Eckart amendment includes stronger provisions for emission controls in interstate ozone transport regions, as sought by many Northeast and Mid-Atlantic states."). All of the descriptions of the amendments in the legislative history refer to the changes made to strengthen and supplement the provisions. See discussion below.

Congress made several changes to sections 110(a)(2)(E) and 126 to overcome EPA's limiting interpretations under the 1977 language, making them easier to apply and more effective in controlling interstate pollution. The Chafee-Baucus Statement of Senate Managers states that the bill "amends section 126 and section 302(h) of the Clean Air Act to strengthen to [sic] prohibitions on emissions that result in interstate pollution." Chafee-Baucus Statement of Senate Managers *reprinted in* I 1990 Legislative History at 886. In describing the changes to section 110, the Senate Committee Report states that "[p]rovisions in existing law requiring SIPs to take into account the effect of emissions on other

States are strengthened." S. Comm. on Envt. and Public Works, Clean Air Act Amendments of 1989, S. Rept. 101-228, 101st Cong., 1st Sess. 19 (1989), *reprinted in* V 1990 Legislative History at 8359. The Senate Committee Report further states "[s]ection 110(a)(2)(E) is replaced by new section 110(c)(4), which, together with changes made to section 126..., improve the effectiveness of the Act as a means of dealing with interstate air pollution."[3] *Id.* at 21, 8361.

One significant change to section 110(a)(2)(E), which became section 110(a)(2)(D), was that Congress extended the prohibition beyond stationary sources to cover other emissions activities, thereby allowing downwind states to obtain relief from an upwind state's pollution emanating from any source. The 1977 version of section 110 required the SIP to contain adequate provisions "prohibiting any **stationary source** within the State...," (emphasis added) which was replaced with "prohibiting, consistent with the provisions of this title, any source **or other type of emissions activity** within the State ..." (emphasis added).

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[3]Section 110(c)(4) was largely identical to the final version of section 110(a)(2)(D), except that it contained one additional provision and did not contain the clause "consistent with the provisions of this title." *See* S. 1630, 101st Cong., 2d Sess. § 101(c) (1990), *reprinted in* III 1990 Legislative History at 4140-4141.

Congress also changed the language of the criteria for showing that the downwind state is harmed by pollution transport. Rather than barring emissions of air pollutants "in amounts which will (I) **prevent** attainment or maintenance by any other State" (emphasis added), Congress modified section 110(a)(2)(D) to bar emissions of air pollutants "in amounts which will-- (I) **contribute significantly to** nonattainment in, or **interfere** with maintenance by, any other State" (emphasis added). Finally, Congress expanded the prohibition to require SIPs to insure compliance with international pollution abatement requirements under section 115, as well as interstate pollution abatement requirements under section 126. In describing the amendments to section 110(a)(2)(E), the Senate Committee Report stated:

> Where prohibitions in existing section 110(a)(2)(E) apply only to emissions from a single source, the amendment includes "any other type of emissions activity," which makes the provision effective in prohibiting emissions from, for example, multiple sources, mobile sources, and area sources.
>
> For interstate pollution to violate current law, it must "prevent attainment." Since it may be impossible to say that any single source or group of sources is the one which actually prevents attainment, the bill

> changes “prevent attainment or maintenance” to “contribute significantly to nonattainment or interfere with maintenance by,” thus clarifying when a violation occurs.

Id. at 21, 8361. The only other change discussed in the Report was an additional strengthening provision that was not included in the adopted amendments.

Congress also made it easier for downwind states to use section 126 by allowing downwind states to petition based on pollution derived from “any major source **or a group of stationary sources**” (emphasis added), not just from a major source, as under the previous version. As there are usually multiple sources in the upwind state contributing to transported pollution, it is far more difficult to prove that any one particular source, rather than the entire set of contributing upwind sources, prevents attainment or maintenance (or contributes significantly to nonattainment or interferes with maintenance) in the downwind state. In describing the amendment to section 126 contained in H.R. 3030, which was identical to the adopted language, the House Committee Report mentions only the strengthening effect of the changes. “Section 126 of the Clean Air Act, concerning interstate air pollution, is amended to provide that when

evaluating the impact of one State's emissions on another State under this section, it is not necessary to focus only on the impacts of a single major source. The evaluation of whether pollution from one State is having a greater than permissible impact on another State is to extend as well to a group of stationary sources." H. Comm. on Energy and Commerce, Clean Air Act Amendments of 1990, H. Rept. 101-490, 101st Cong., 2d Sess. 274 (1990), *reprinted in* II 1990 Legislative History at 3298.[4]

Congress also strengthened section 126 by adding "this section" in several places in section 126(b) and (c). This addition explicitly allowed a finding that a source would emit or is emitting in violation of section 126, in addition to a finding that the source would emit or is emitting in violation of the prohibition of section 110(a)(2)(D). The amendments also made continued operation after a section 126 finding a violation of section 126 itself, in addition to being a violation of the applicable SIP.

In addition, Congress adopted changes to the definitions of "air pollutant" and "welfare" that made the interstate transport provisions clearly applicable to

[4]Note that this is the sum total description of the section 126 amendment in the House Committee Report. This version of the House bill also contained the 176A and 184 provisions, which the House Committee Report did not describe at all. See H. Rep. 101-490, 101st Cong., 2d Sess. at 274, *reprinted in* II 1990 Legislative History at 3298.

emissions of precursors to air pollution, not just emissions of the NAAQS pollutants. This overrode EPA's previous limiting interpretation that when reviewing a SIP revision, EPA could only consider the impacts on interstate pollution of the particular pollutant controlled under the SIP, not any other pollution impacts that result from transformation of the pollutant. *See, e.g., Connecticut v. U.S. EPA*, 696 F.2d 147, 162 (2d Cir. 1982); *Connecticut Fund for the Env't v. U.S. EPA*, 696 F.2d 169, 177 (2d Cir. 1982); Patton, *supra,* at 10166.

Congress also adopted provisions to establish interstate transport commissions, giving states and EPA a new tool to use to tackle the intractable interstate pollution problem. Section 176A provides general provisions for the creation and functioning of interstate transport regions and interstate transport commissions, while in section 184 Congress directly established the Northeast Ozone Transport Region. The transport commission approach is based on a recognition that regional problems require regional, rather than state-by-state, solutions, and a good way to achieve regional solutions may be for the affected states to develop them and the federal government to require their implementation. This maximizes information for decision-making, generates political support for the

outcome, and increases the likelihood that states will implement identified solutions.

Under section 176A(a), EPA may establish by rule a transport region for a pollutant whenever the interstate transport of air pollutants from one or more states contributes significantly to a violation of a NAAQS in one or more other states. The transport region would include both the contributing and affected states. EPA may establish the transport region on its own, or may act upon a petition from a Governor of any state. Section 176A(b) requires establishment of a transport commission for each transport region. The commission is to be comprised of a representative of the Governor and an air pollution control official from each state in the transport region, an EPA Headquarters representative, and a representative of each affected EPA Region. The transport commission is to assess interstate pollution transport throughout the region, assess strategies for mitigating the transport, and recommend to EPA measures necessary for SIPs to meet the requirements of section 110(a)(2)(D). Under section 176A(c), the transport commission may request EPA to find under section 110(k)(5) that the SIPs for one or more of the states in the region are inadequate to meet the requirements of section 110(a)(2)(D). The EPA must act to approve, disapprove or

partially approve and partially disapprove the recommendations within eighteen months of receipt.

Section 184 contains additional provisions applicable specifically to ozone transport regions and establishes the northeastern ozone transport region by operation of law. Section 184(b) requires each state in an ozone transport region to adopt SIP revisions containing specified control measures related to motor vehicle inspection and maintenance programs, reasonably available control technology for control of VOCs, and vehicle refueling controls. Section 184(c) lays out a process for an ozone transport commission to develop and EPA to act on recommendations for additional control measures necessary to bring any area in the region into attainment. EPA must approve, disapprove, or partially approve and partially disapprove the recommendations within nine months of their receipt. Upon full or partial approval of the recommendations, EPA must issue a SIP call under section 110(k)(5) requiring the relevant states to revise their SIPs to include the recommended measures to meet the requirements of section 110(a)(2)(D). If EPA disapproves the recommendations, EPA must explain why the disapproved measures are not necessary to bring any area in the region into attainment and must recommend equal or more effective actions that the commission could take to conform the

recommendations to the section 184 requirements. Section 184(d) requires EPA to promulgate criteria requiring that the best available air quality monitoring and modeling techniques be used to determine the contribution of sources in one area to concentrations of ozone in a nonattainment area.

Comments: A number of commenters argue that Congress modified section 126 and section 110(a)(2)(D) in the 1990 Amendments to eliminate EPA's authority to take action against upwind sources, except upon a recommendation from a transport commission established under section 176A or section 184. They argue that the adoption of sections 176A and 184, combined with the addition of the language "consistent with the provisions of this title" in section 110(a)(2)(D) and the amended cite to section 110(a)(2)(D)(ii) in section 126, eliminates EPA's authority to act under section 126(b) and (c), except with respect to failures to notify under section 126(a). One commenter also cites section 110(k)(5) to support the argument that EPA may not act to address interstate transport problems except upon the recommendation of an interstate transport commission established under section 176A or section 184.

Response: Congress viewed the creation of interstate transport commissions as a valuable new approach to

resolving interstate pollution problems that would encourage the affected states to help design a solution. As stated by Senator Lieberman, "[t]he creation of a regional air quality commission is an important and creative part of the bill. It recognizes that it is impossible to put a cleanup bubble over an individual State. It puts some responsibility on the States to be good neighbors." S. Debate on H. Conf. Rep. 101-952, 10/27/90, *reprinted in* I 1990 Legislative History at 1053. Commenters argue that these new interstate transport commission provisions are the exclusive means for EPA to address interstate pollution transport. However, nothing in the structure or language of the interstate pollution provisions themselves, their discussion in the legislative history, or the historical development of the statutory authorities to address interstate pollution through successive versions of the CAA, supports the assertion that the new provisions were intended to replace, rather than supplement, EPA's existing authority to address interstate pollution problems under section 110(a)(2)(D) and section 126.

First, a straightforward interpretation of the CAA language and structure leads to the conclusion that there are four fully effective provisions providing multiple tools for EPA and states to use to address interstate pollution

problems. It is a cannon of statutory construction that statutes should be interpreted, if possible, to give full effect to all of the statutory language. *See Alabama Power Co. v. EPA*, 40 F.3d 450, 455 (D.C. Cir. 1994) (a statute "is to be interpreted to give consistent and harmonious effect to **each** of its provisions.") (Emphasis added, citation omitted). The simplest interpretation of the inter-relationship of these four provisions addressing interstate transport is that each one plays a role in a rational system for upwind states, downwind states and EPA to work together to develop and implement solutions for interstate pollution transport.

Section 110(a)(2)(D) establishes one of the basic requirements that each state must address in its air pollution planning efforts -- the SIP must contain adequate provisions prohibiting emissions that contribute significantly to nonattainment in, or interfere with maintenance by, any other state. This provision places the primary responsibility to prohibit such emissions on the upwind state, but requires EPA to evaluate the adequacy of a state's SIP submission in this respect and potentially to disapprove the SIP on these grounds. A SIP disapproval will eventually trigger sanctions against the state if it does not revise the submission to contain adequate provisions for

control of interstate transport. While the downwind states are the parties with the greatest incentive to obtain emissions reductions upwind, section 110(a)(2)(D) only provides a limited role for downwind states. They may object to EPA's proposed approval of a SIP submission on the grounds that it fails to control interstate transport as required by section 110(a)(2)(D), but cannot initiate action on interstate pollution transport under this provision.[5] *See, e.g.*, *State of New York v. U.S. EPA*, 710 F.2d 1200 (6th Cir. 1983) (upholding EPA's approval of a SIP revision for Tennessee and rejecting New York's claim that the revision violated the requirements of section 110(a)(2)(E)).

Congress adopted section 126 to give downwind states a stronger tool to impel action by EPA and upwind states. First, section 126(a) gives downwind states access to emissions information that may be necessary for them to identify the upwind sources of their nonattainment or maintenance problems. Second, section 126(b) and (c) allows downwind states to petition EPA directly to make a finding

[5]Under section 553(e) of the Administrative Procedure Act, a downwind state could petition EPA to issue a SIP call under section 110(k)(5) on the grounds that an upwind state's SIP failed to meet section 110(a)(2)(D). *See* 5 U.S.C. 553(e). However, EPA would have discretion to decide when to act on the petition, subject only to a lawsuit for unreasonable delay under section 304(a) of the CAA. In contrast, section 126 establishes a nondiscretionary duty and deadlines for EPA to act on a petition under that section, which a state may enforce through a citizen suit under section 304.

that upwind sources are emitting air pollutants in violation of the section 110(a)(2)(D)(i) prohibition on emissions that contribute significantly to nonattainment in, or interfere with maintenance by, any other state. If EPA makes a finding under section 126, EPA must directly regulate the sources of the upwind emissions. Relief does not depend upon any action by the upwind states, as is necessary for a SIP revision. Thus, where currently approved SIPs do not contain adequate provisions protecting downwind states from pollution transport, section 126 provides powerful recourse to the entities most motivated to reduce transport. It allows the downwind states to initiate action and gives EPA authority to implement a solution directly, without requiring additional state response.

The sections 176A and 184 provisions on interstate transport commissions supplement this scheme in two key respects. These sections provide a stronger action-forcing tool for a situation where a majority of upwind and downwind states have developed a compromise solution to pollution transport in a region, but EPA has not acted to support implementation of that solution. *See* S. Rep. 101-228, 101st Cong., 1st Sess. at 51 (1989), Leg. Hist V. at 8391 ("A regional ozone transport commission is one important way to address these problems identified by modeling and

monitoring. State air quality directors in the northeast have been cooperating for several years to develop a regional solution to the ozone problem. Lack of support by EPA and lack of authority to institute needed regional controls (both in attainment and nonattainment areas) have prevented this effort from being more successful.") The transport commission approach contemplates that all affected states in an interstate transport region will come together with EPA and identify emission control measures supported by at least a majority of the states. Under the more specific provisions of section 184, the transport commission will forward the recommended emission control measures to EPA, which then must take action to approve or disapprove the recommended measures pursuant to criteria contained in section 184.

Establishment of an interstate transport commission also may help improve the political viability of potential solutions to interstate transport problems, and hence increase the likelihood that such solutions will be implemented through state and EPA actions. Bringing the states together as a body to develop solutions emphasizes the shared responsibility for the problem and the need to address it through compromise and mutual agreement. Access to a shared body of information increases the likelihood of

reaching similar conclusions, although, of course, the same information will always be analyzed somewhat differently in light of different state interests. Participation in a formal analysis and decision-making process increases the parties' investment in the outcomes, thereby enhancing political support for the recommended actions. Finally, enhanced political support for the recommendations makes it easier for EPA to require implementation of those recommendations. See Section I.B. for discussion of how the OTAG process has fulfilled some of these functions in this proceeding.

While Congress clearly saw the opportunities provided by a state process for developing regional solutions, the process is designed to promote consensus solutions where those are possible, but has no mechanism for forcing action where states remain strongly divided. Recommendations may only be made by vote of the majority of the states represented. Where the transport commission approach works and produces recommendations to EPA, the solutions developed may well be optimal in terms of effectiveness and acceptability. However, there is simply no forcing function to ensure that the transport commission process will ever identify any, let alone an adequate, solution to any particular interstate transport problem. In fact, the

northeast ozone transport commission established by operation of law under section 184 has produced only one recommendation to EPA, which was approved by EPA but overturned in litigation. Moreover, apart from the establishment of the northeast ozone transport commission by operation of law, EPA has discretion as to whether even to establish a transport region, and hence transport commission, to address a given interstate transport problem. *See* CAA, section 176A ("Whenever, on the Administrator's own motion or by petition from the Governor of any State, the Administrator has reason to believe that the interstate transport of air pollutants from one or more States contributes significantly to a violation of a national ambient air quality standard in one or more other States, the Administrator **may** establish, by rule, a transport region....") (emphasis added). Thus, the regional transport commissions provide a potentially useful tool, but by no means a panacea, for the interstate pollution problem.

Despite the inherent limitation in the transport commission approach -- a structure that builds in a significant possibility that it may never actually act to reduce any interstate pollution -- commenters argue that Congress intended to rely solely upon this one potential approach and strip from EPA and downwind states the existing

alternative tools to address the problem that Congress had so carefully developed in the 1970 and 1977 Amendments. It is hardly logical to presume from the adoption of these transport commission provisions (in the absence of any statutory language to that effect) that Congress intended them also to divest EPA of authority to act at all in the absence of a formal recommendation from a majority of affected states. Such a presumption is inconsistent with both Congress' expressions of concern about the effect of interstate transport on downwind states and Congress' support for unilateral federal action if states continued to fail to address the problem. *See, e.g.*, Lieberman, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* I 1990 Legislative History at 1053 ("Another provision of the bill which is an important part of our effort to control air pollution transported from other areas is the requirement that the Federal Government intervene and promulgate a plan of emission controls in an area where the State fails to act. This provision guarantees that if States sending pollution to Connecticut are not doing their jobs in controlling pollution, Connecticut will be assured that the Federal Government will step in and do the job.")

Commenters claim that allowing EPA to act on interstate

transport problems without a recommendation from a transport commission reads section 176A and 184 out of the CAA. This is nonsense. The transport commission provisions provide a structure, authority and incentive for state-driven solutions to regional pollution problems. The EPA has strong legal and policy-based reasons to encourage such consensus-based solutions and implement them where they emerge. Providing EPA independent authority to act in the absence of a transport commission or where the commission has failed to produce any recommendations does not undermine the transport commission's authority, much less render those provisions meaningless. Rather, by increasing the likelihood of some action even in the absence of a recommendation, EPA's authority may well encourage states to develop their own consensus-based solutions in preference over imposition of requirements developed by EPA. The logical interpretation of the structure of the Act is that the transport commission provisions complement, but do not replace, the other interstate pollution provisions contained in section 110(a)(2)(D)(i) and section 126 specifying requirements for SIPs and providing for direct reductions from sources, even in the absence of any regional agreement.

Second, the language of the provisions simply does not support the commenters' arguments. Section 126 states that

"[a]ny state...may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of section 110(a)(2)(D)(ii) or this section." Sections 176A and 184 provide authority to establish, and for the northeastern ozone transport region directly establish, transport regions and transport commissions. There is no language in either section 126, or the sections that supposedly largely negate section 126(b) and (c), suggesting that section 126 is superseded by sections 176A and 184 or that all three provisions do not remain in effect.

Moreover, in the 1990 legislation, Congress amended section 126 to strengthen its effectiveness by broadening its scope without any indication that it intended to simultaneously dramatically curtail EPA's authority under that provision. *See* Chafee-Baucus Statement of Senate Managers, *reprinted in* I 1990 Legislative History at 886 (stating that the bill "amends section 126 and section 302(h) of the Clean Air Act to strengthen to [sic] prohibitions on emissions that result in interstate pollution."). The amendments made it a prohibition of section 126 itself, as well as of the applicable SIP (as the previous version provided), for a source to continue to

operate for more than three months after EPA makes a finding under section 126. They also explicitly allowed a finding that a source would emit or is emitting in violation of section 126, in addition to the pre-existing language allowing a finding that the source would emit or is emitting in violation of the prohibition of section 110(a)(2)(D).

Under the commenters' interpretation of the amended version of section 126, Congress strengthened the petition process while limiting its applicability to violations of notification requirements. This interpretation necessarily presumes that Congress intended to enhance EPA's power to enforce through source shut-downs a requirement with no direct environmental impacts, while removing EPA's pre-existing independent authority to reduce the actual emissions. The commenters claim that the petition process under section 126(b) and (c) is now limited to petitions claiming that an upwind state has violated section 126(a) by failing to provide information to a downwind state regarding certain sources of emissions in the upwind state. Section 126(a) requires a SIP to include a requirement to provide information to downwind states for each major new or existing source regarding emissions "which may significantly contribute to levels of air pollution in excess of the national ambient air quality standards" in those downwind

states. Commenters are arguing that EPA could shut down a source under section 126 because it had failed to comply with the notification requirements, but could not shut down such a source because it was emitting prohibited quantities of air pollution. Moreover, the notification requirement applies to each major proposed new or modified source that (a) is subject to part C of title I (relating to prevention of significant deterioration of air quality) or (b) **may** significantly contribute to levels of air pollution in excess of the NAAQS downwind. Thus, under the commenters' interpretation, the notification requirement, and hence the shut down remedy for its violation, potentially applies to sources that do not actually significantly contribute to downwind air pollution, while no longer applying to sources because they do so contribute. The language of the statute does not indicate that Congress intended this result, and its inherent irrationality strongly suggests the contrary.

Commenters also rely on the revised language of section 110(a)(2)(D) and the new section 110(k)(5) to argue that sections 176A and 184 are now the sole authorities for addressing interstate pollution transport. The commenters point to the new language in section 110(a)(2)(D)(i), which requires SIPs to prohibit, "**consistent with the provisions of this title**" (emphasis added), emissions that contribute

significantly to nonattainment or interfere with maintenance. They also note that section 110(k)(5), which Congress added in the 1990 Amendments, gives EPA authority to call for a SIP revision when a plan fails "to mitigate adequately the interstate pollutant transport described in section 176A or section 184." The commenters argue that together, these provisions bar EPA from acting under section 110(k)(5) and section 110(a)(2)(D)(i) (whether or not in conjunction with section 126) in the absence of recommendations from an interstate transport commission established under section 176A or section 184.

The revision to section 110(a)(2)(D)(i) adds a general clause requiring adopted SIP provisions to be consistent with title I requirements. Nowhere in the statute is there language indicating that sections 176A and 184 provide the sole mechanisms to address interstate pollution transport. In the absence of such language, it is unclear how the requirement for consistency with other provisions can be bootstrapped into establishing the supremacy of certain provisions over others. Since nothing in sections 176A or 184 states that those provisions override other statutory provisions which establish other means of addressing interstate pollution transport, it is perfectly consistent with the language sections 176A and 184 for EPA to exercise

the authority directly established under sections 126 and 110(a)(2)(D)(i).

Under EPA's interpretation, the language "consistent with the provisions of this title" serves the purpose of ensuring that in requiring a SIP to contain adequate provisions for interstate transport, EPA may not require states to take, and states may not take on their own initiative, actions that are barred by or in conflict with other requirements under title I. Title I establishes a multitude of detailed requirements for states to adopt and submit SIP revisions adequate to achieve and maintain each of the NAAQS in different areas on various timetables. The 1990 Amendments greatly increased the detail and complexity of the state planning requirements in title I. Thus, it is perfectly reasonable that, in strengthening the section 110(a)(2)(D)(i) interstate transport requirements, Congress wanted to make certain that these new more stringent requirements would not override or interfere with other title I provisions. This is what the language on its face requires. Had Congress intended to allow EPA to act under section 110(a)(2)(D)(i) only upon the recommendation of an interstate transport commission, it presumably would have said that instead.

The legislative history supports EPA's interpretation

that the language “consistent with the provisions of this title” was intended to be a catch-all safety clause, rather than a significant substantive change. The language was introduced in H.R. 3030 as approved by the House Committee on Energy and Commerce, and was included in the version approved by the House. The version approved by the full Senate did not contain the language, but it was retained in the Conference Committee version approved by both Houses. In all of the discussions of the changes made to sections 110(a)(2)(D)(i) and 126 and the addition of sections 176A and 184 by both Houses, there is no mention of this language. It is implausible that Congress intended the language to dramatically reduce the scope of section 110(a)(2)(D)(i) without mention, while discussing all of the strengthenings of these provisions.

The language of section 110(k)(5) also does not limit EPA’s authority to act under section 110(a)(2)(D)(i) only upon the recommendations of a transport commission. Section 110(k)(5) allows EPA to call for a SIP revision “to otherwise comply with any requirement of this Act.” The fact that section 110(k)(5) also identifies two specific instances where a SIP would be inadequate does not narrow the scope of the last catch-all clause. In adopting the interstate transport commission provisions in the 1990

Amendments, Congress established an entirely new additional mechanism for addressing interstate pollution, which did not depend solely on EPA action. Concurrent with establishing a new mechanism under the statute, it makes sense that Congress would specifically identify a SIP call under section 110(k)(5) as a key element in implementing that mechanism. It does not follow, however, that Congress intended to remove EPA's authority to call for a SIP revision in other circumstances related to interstate transport. *See also* 63 FR at 57368, NOx SIP Call Response to Comments Document, 39-43.

Third, the legislative history supports EPA's interpretation that all four provisions remain fully effective. The legislative history contains numerous descriptions of the amendments as strengthening the authority to address the problem of interstate pollution. *See, e.g.*, Chafee-Baucus Statement of Senate Managers, *reprinted in* I 1990 Legislative History at 886 (stating that the bill "amends section 126 and section 302(h) of the Clean Air Act to strengthen to [sic] prohibitions on emissions that result in interstate pollution."); S. Rep. 101-228, 101st Cong., 1st Sess. at 19 (1989), *reprinted in* V 1990 Legislative History at 8359 (in describing the changes to section 110, states that "[p]rovisions in existing law

requiring SIPs to take into account the effect of emissions on other States are strengthened."); House Committee on Energy and Commerce, H. Rep. 101-490, 101st Cong., 2d Sess. at 274 (1990), *reprinted in* II 1990 Legislative History at 3298 (full text of the description of the amendments to section 126 follows: "Section 126 of the Clean Air Act, concerning interstate air pollution, is amended to provide that when evaluating the impact of one State's emissions on another State under this section, it is not necessary to focus only on the impacts of a single major source. The evaluation of whether pollution from one State is having a greater than permissible impact on another State is to extend as well to a group of stationary sources.").

In addition to the specific discussions in the legislative history identified above, the legislative history is informative through what it does not mention. The substantive changes to section 110(a)(2)(D) are discussed in the Senate Committee Report, and the House Committee Report. The substantive changes to section 126 are discussed in both Committee Reports and the Chafee-Baucus Statement of Senate Managers. The addition of sections 176A and 184 are discussed in all of these sources plus statements on the House and Senate floors. None of these discussions states or implies that in addition to the

strengthening changes identified, Congress also intends to sharply restrict EPA's pre-existing authority under sections 110(a)(2)(D)(i) and 126 and to establish sections 176A and 184 as the sole sources of authority to address interstate pollution transport. Rather, the references in the legislative history to sections 176A and 184 suggest that interstate transport commissions provide one, rather than the only means by which to address the problem. *See*, S. Rep. 101-228, 101st Cong., 1st Sess. at 51 (1989), *reprinted in* V 1990 Legislative History at 8391 ("A regional ozone transport commission is **one** important way to address these problems identified by modeling and monitoring." (emphasis added); Baucus, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* I 1990 Legislative History at 1003 ("We believe that the transport commissions can play a vital role in abating interstate air pollution control problems.")

Fourth, as discussed extensively above, Congress adopted the 1990 Amendments in the context of continued lack of progress on the interstate pollution problem and the failure of many areas affected by interstate pollution transport to meet the NAAQS, and with the goal of strengthening the CAA to produce results in the form of cleaner air. The commenters argue that Congress intended to

remove a primary mechanism for reducing interstate transport and leave downwind states with no recourse should upwind states fail to agree to recommend a solution. They claim that Congress recognized "that the adversarial approaches of the past -- pitting one state against another and pitting EPA against one of those states -- had not worked and would not work." Therefore, they argue that Congress "restricted EPA's authority to create the kind of confrontation and controversy that had existed in the past." This is revisionist history, uninformed by the historical development of the CAA and the factual and political context in which Congress acted. The legislative history contains numerous references to the problem of interstate pollution, the failure to make progress in reducing pollution transport, and the effects on downwind states.[6] The

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[6] *See, e.g.*, Lieberman, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* I 1990 Legislative History at 1055 ("In the years since the Clean Air Act was amended–back in 1977–the air has become dirtier and more dangerous. Our uphill climb against the ravages of pollution has turned into a downhill fall, and only now are we realizing the real impact of our failure to act.");S. Rep. 101-228, 101st Cong., 1st Sess. at 48 (1989), *reprinted in* V 1990 Legislative History at 8388 ("[a]reas in some States may be unable to attain the ozone standard despite implementation of stringent emissions control because of pollution transported into such areas from other States....The transport problem in the northeast, and perhaps other regions as well, is serious enough that additional efforts must be made on an interstate basis to control emissions, including emissions from attainment areas."); Lautenberg, S. Debate on H. Conf. Rep. 101-952,

legislative history expresses concern about the lack of EPA and state action, but nowhere evinces a concern about conflict between the states or adversarial relationships. (Note that commenters do not cite any support for their characterization of Congress' motivations).

101st Cong., 2d Sess., 10/26/90, *reprinted in* I 1990 Legislative History at 1106 ("In New Jersey, the Department of Environmental Protection says that on some days even if we shut down the entire State, we would be in violation of some health standards because of pollution coming over from other states."); Lieberman, S. Debate on S. 1630, 1/31/90, *reprinted in* IV 1990 Legislative History at 5077 ("Indeed, it is in part the lack of support of EPA which in the past has prevented the effort to institute regional controls from being successful."); H. Debate, 101st Cong., 2d Sess., 5/21/90, Clean Air Facts, *reprinted in* II 1990 Legislative History at 2558 ("Stronger interstate transport provisions.–The Swift/Eckart amendment includes stronger provisions for emission controls in interstate ozone transport regions, as sought by many Northeast and Mid-Atlantic states."); Lieberman, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* I 1990 Legislative History at 1053; Baucus, S. Debate on H. Conf. Rep. 101-952, 101st Cong., 2d Sess., 10/27/90, *reprinted in* I 1990 Legislative History at 1004 ("[] EPA bears a heavy burden of demonstrating that the additional control measure(s) is not necessary to bring any area of the region into attainment by the dates provided and to recommend equal or more effective actions that could be taken designed [sic] to replace the recommendation. Any recommendations by EPA under this section, designed to replace the recommendations of the Commission, shall not place an unfair burden on any state which is the victim of the transported air pollution."); Lieberman, S. Debate, 101st Cong., 2d Sess., 1/31/90, *reprinted in* IV 1990 Legislative History at 5076 ("So there is a basic point here that Connecticut cannot clean its air itself because so much of its problems comes from outside of the State of Connecticut, and therefore if we are going to have clean air in Connecticut [sic] in so many other States in the country, but particularly in the Northeast, we need help from the Federal Government.").

The commenters' interpretation is that Congress made section 126(b) and (c) no longer effective for petitions against sources of pollution. For this interpretation to be correct, Congress must have revised the CAA to drastically limit section 126(b) and (c): (1) without repealing the provisions; (2) without explicitly overriding them elsewhere in the CAA; (3) while adding language to strengthen those provisions; (4) without mentioning the change in the legislative history discussions of any of these provisions; and (5) while pursuing a forcefully stated intent to compel EPA and the states to make more progress on reducing interstate pollution. The EPA finds this argument profoundly unconvincing.

For further discussion of EPA's position on these issues please see the section 126 proposed rule, the NOx SIP Call final rule and the NOx SIP Call Response to Comments Document. 63 FR 56292; 63 FR 57356.

2. Scrivener's Error

Section 126(b) provides that a State may petition EPA for a finding that specified sources or groups of sources in other States emit or would emit air pollutants "in violation of the prohibition of section 110(a)(2)(D)(ii) of this title or this section." In turn, section 110 (a)(2)(D) requires that a SIP:

Contain adequate provisions:

(I) prohibiting, consistent with the provisions of this title, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will–

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to [any] national ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility,

(ii) insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement).

The EPA has concluded that the cross-reference in section 126(b) to section 110(a)(2)(D)(ii) is a scrivener's error and that Congress intended to refer to section 110(a)(2)(D)(I). Simply stated, the Agency believes that Congress in the 1990 CAA Amendments meant to make a conforming change in section 126(b) by replacing the pre-

existing cross-reference to section 110(a)(2)(E)(I) with the renumbered section 110(a)(2)(D)(I), but inadvertently referenced section 110(a)(2)(D)(ii). As explained in greater detail below, this interpretation is based on the statute's logic and structure, as well as the legislative history. First, the reference to "the prohibition of section 110(a)(2)(D)(ii)" is ambiguous at best, and arguably nonsensical, since section 110(a)(2)(D)(ii) contains no prohibition, yet section 110(a)(2)(D)(I) does. Second, the statutory cross-reference contained in section 126(b), if taken on its face, would render section 126(b) largely meaningless. Finally, the legislative history of the CAA Amendments supports this interpretation. The EPA's interpretation is consistent with the reading of the CAA prior to the 1990 Amendments and Congress expressed no indication that it meant to substantively revise this provision of the statute at the time it administratively renumbered the provision.[7]

Many commenters agreed with EPA's interpretation (presented in the proposal at 63 Fed. Reg. at 56299) that

[7]The 1990 CAA Amendments revised section 110(a)(2)(D) by dropping certain provisions not relevant here, and incorporating other provisions previously contained in section 110(a)(2)(E). See CAA Amendments of 1990, Pub. L. 101-549, 101(b), 104 Stat. 2404(1990); S. Rep. No. 101-228, 101st Cong., 2d Sess. 20 (1989), reprinted in 1990 U.S.C.C.A.N. 3385, 3406.

the cross-reference is a scrivener's error and should be read as section 110(a)(2)(D)(i). However, the Agency also received numerous comments taking exception to this view. Such commenters argued that section 126(b) should be read literally, such that the provision does not authorize EPA to issue a finding that new or existing sources contribute significantly to nonattainment downwind or interfere with measures to prevent significant deterioration of air quality or to protect visibility. For the reasons described below, EPA continues to believe that the cross-reference in section 126(b) should be interpreted as referring to section 110(a)(2)(D)(i).

The doctrine of scrivener's error recognizes that typographical and other drafting errors occasionally occur in the legislative process. The U.S. Supreme Court therefore has determined that such errors may be corrected where the statute "can't mean what it says," *Green v. Bock Laundry Machine Co.*, 490 U.S. 504, 511 (1989) (internal quotation marks omitted), and that courts should "repunctuate, if need be, to render the true meaning" of a statute. *U.S. Nat'l Bank v. Independent Ins. Agents*, 508 U.S. 439, 462 (1993) (quoting from *Hammock v. Loan & Trust Co.*, 105 U.S. 77, 84-85 (1882)). Courts have applied this doctrine when the literal text "would lead to unintended and

absurd results." *In re Chateaugay Corp.*, 89 F.3d 942, 954 (2nd Cir. 1996) (holding that courts are empowered to correct an erroneous statutory cross-reference that inadvertently results from legislative changes). The EPA's specific authority to apply this doctrine was recently upheld in a case involving other aspects of the Clean Air Act's SIP provisions. *Environmental Defense Fund v. EPA*, 82 F.3d 451 (D.C. Cir. 1996) (affirming EPA's authority to depart from the literal reading of section 176(c) of the Clean Air Act where it would frustrate congressional purposes).

Some commenters argued that the cross-reference in section 126(b) is not "one of those rare cases where the statute as written will produce a result demonstrably at odds with the intentions of the drafters." *Demarest v. Manspeaker*, 498 U.S. 184, 190 (1991) (internal quotations and citations omitted). At best, however, the cross-reference in section 126(b) is ambiguous. First, section 126(b) authorizes EPA to find that any major source or group of stationary sources emits or would emit any air pollutant "in violation of the *prohibition of section (a)(2)(D)(ii)* of this title or this section" (emphasis added). However, section 110(a)(2)(D)(ii) contains no prohibition. Rather, it provides that SIPs must "contain adequate provisions

insuring compliance with" statutory sections relating to interstate and international pollution abatement.

By contrast, section 110(a)(2)(D)(i)--the provision that EPA believes Congress intended to cross-reference in section 126(b)--does contain a prohibition. It requires that SIPs contain adequate provisions "prohibiting" any source or other type of emissions activity within the State from emitting any air pollutant in amounts that, among other things, will contribute significantly to nonattainment in, or interfere with maintenance by, another State with respect to the NAAQS. Thus, the textual interplay between sections 126(b) and 110(a)(2)(D) provides strong evidence that the CAA contains a scrivener's error.[8]

As further support, reading section 126(b) as cross-referencing section 110(a)(2)(D)(ii) essentially renders that provision redundant and meaningless. Section 126(b) allows a party to petition EPA with respect to a "violation of the prohibition in section 110(a)(2)(D)(ii) or this section." Section 110(a)(2)(D)(ii) states that SIPs must contain adequate provisions to insure compliance with

[8]One commenter argued that Congress, in referring to sections 126(b) and 110, used the words "prohibition" and "requirements" interchangeably. Based on the provisions' text, structure and legislative history, EPA disagrees. Nevertheless, the fact that reasonable people can disagree on this issue confirms that section 126(b) is, at the very least, ambiguous.

sections 126 and 115. To the extent section 110(a)(2)(D)(ii) cross-references back to section 126, the statute is redundant. Reading the two provisions together, section 126(b) would provide an opportunity for parties to file a petition claiming that a major source violates the prohibition of section 110(a)(2)(D)(ii) (i.e., section 126) or this section (i.e., section 126).

Moreover, to the extent that section 110(a)(2)(D)(ii) references section 115, the provision is meaningless. There is no relief that can be provided under section 126(b) for violations of section 115. Rather, sections 126 and 115 create separate processes for different parties to petition the Agency for a finding that a SIP is inadequate. Under section 115, the Administrator may issue a SIP call to a State based on a request by an international agency or the Secretary of State that an air pollutant or pollutants emitted in the United States “cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country." In contrast, only “States” or “political subdivisions” --entities under the jurisdiction of the United States– may request relief under section 126(b). If Congress intended to provide States or political subdivisions in the United States with the opportunity to seek relief for pollution

transported to foreign countries, Congress could have provided so in a much clearer fashion in section 115. It is highly doubtful that Congress would have used such a cryptic reference to grant political entities within the United States the power to address pollution being transported out of the country from other States.

Further textual evidence that section 126(b) contains a scrivener's error is found by examining section 126(c). Amended at the same time as section 126(b), Congress modified section 126(c) by replacing the two references to the original State petition process, section 110(a)(2)(E)(i), with the renumbered section "110(a)(2)(D)(ii) or this section."[9] As amended, the new cross-references are ambiguous because they conflict with the structure and text of section 126(c). Read literally, section 126(c) would provide for enforcement of violations of section 110(a)(2)(D)(ii), which requires SIPs to insure compliance with section 126 (the interstate pollution provisions) and section 115 (the international pollution

[9]As amended, section 126(c) states that it shall be a violation for any major proposed new or modified source "to be constructed or to operate in violation of the prohibition of section 110(a)(2)(D)(ii) or this section." 42 U.S.C. § 7426(c) (1995). The provision also provides discretion to the Administrator to allow sources to operate beyond three months after a finding of violation where needed "to bring about compliance with the requirements contained in section 110(a)(2)(D)(ii) or this section." Id.

abatement provisions). As discussed above, these cross-references are redundant with respect to section 126 and meaningless with respect to section 115. In addition, section 126(c) again refers to the non-existent "prohibitions" of 110(a)(2)(D)(ii). There is also no legislative history indicating that Congress intended to make such substantive legal changes. In contrast, the interpretation that Congress meant to renumber section 110(a)(2)(E)(i) as 110(a)(2)(D)(i) avoids these ambiguities and restores the section 126 State petition process to the structure and manner in which it was intended to function prior to the 1990 CAA Amendments. As such, EPA believes that the text, structure and legislative history of section 126(c) bolsters the Agency's conclusion that section 126(b) contains a scrivener's error.[10]

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[10]EPA's interpretation that the cross-reference in section 126(b) is a scrivener's error is further supported by the existence of two clear, non-controversial typographical errors in the same provision. First, section 126(c) refers to "enforcement orders under section 113(d)," which was amended by section 701 of the 1990 Clean Air Act Amendments (Pub. L. 101-549, 104 Stat. 2672) without conforming this reference. Similarly, the Clean Air Act Amendments (Pub. L. 101-549, section 109(a)(2)(A), 104 Stat. 2470) amended section 126(c) in the first sentence by inserting "this section and" after "violation of" without further specification. However, the words "violation of" appear in two places in the sentence. Thus, read literally, section 126(c)(1) prohibits construction or operation "in violation of this section and the prohibition of 110(a)(2)(D)(ii) or this section." These errors were noted by the House Energy and Commerce Committee, 103d Congress, 1st Sess., Committee

The EPA received comments suggesting that there is no ambiguity in section 126(b) because, on its face, it refers to section 110(a)(2)(D)(ii), not 110(a)(2)(D)(i). However, "[t]he rule that statutes are to be read to avoid absurd results allows an agency to establish that seemingly clear statutory language does not reflect the unambiguously expressed intent of Congress and thus overcome the first step of the Chervon analysis." *Mova Pharmaceutical Corp. v. Shalala*, 140 F.3d 1060, 1068 (D.C. Cir. 1998) (internal citations omitted). *See also Chemical Manufacturers Association v. Natural Resources Defense Council*, 470 U.S. 116, 126-27 (1985) (finding that the word "modify" has no plain meaning as used in section 301 of the Clean Water Act and is properly subject to construction by EPA).

The EPA's interpretation that there is a scrivener's error, and that the reference should be to section 110(a)(2)(D)(i), fits with the legislative history on this provision. *See Public Citizen v. Department of Justice*, 491 U.S. 440, 454 (1989) (if apparently plain language compels an "odd result," evidence of legislative intent other than the text itself, such as the legislative history, should be considered). The Agency received comments contesting this

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Print 103-B, *Compilation of Selected Acts Within the Jurisdiction of the Committee on Energy and Commerce (Feb. 1993)*, at 124.

conclusion and arguing that the legislative history is, at best, inconclusive. The EPA disagrees with this characterization. The Agency's review of the legislative history indicates that Congress' broad aim was to strengthen the section 126(b) State petition process and there is nothing to suggest that Congress meant to substantively revise this process when it administratively renumbered section 110.

Several aspects of the legislative history are worth highlighting. First, prior to the 1990 Amendments, section 126(b) could be used by States to petition EPA for a finding about "violation[s] of the prohibition of section 110(a)(2)(E)(i)," which required SIPs to address interstate pollution. 42 U.S.C. 7410(a)(2)(E)(i) (1990). The 1990 Clean Air Act Amendments simply revised the text of former section 110(a)(2)(E)(i) and then renumbered it as section 110(a)(2)(D)(i). *Compare* 42 U.S.C. 7410(a)(2)(E)(i) (1990) *with* 42 U.S.C. 7410(a)(2)(D)(i) (1995). In other words, EPA's interpretation that section 126(b) contains a scrivener's error and that Congress intended to cross-reference section 110(a)(2)(D)(i) is consistent with both the structure of sections 126(b) and 110 and the way in which the section 126(b) State petition process was intended to function prior to the 1990 CAA Amendments.

Second, the U.S. Supreme Court has noted that, "[u]nder established canons of statutory construction, it will not be inferred that Congress, in revising and consolidating the laws, intended to change their effect unless such intention is clearly expressed." *Finley v. U.S.*, 490 U.S. 545, 554 (1989) (internal quotation marks omitted). Yet there is nothing in the legislative history to even suggest that Congress intended to dramatically limit the State petition process when it renumbered section 110(a)(2)(E)(i).

Indeed, the evidence indicates the opposite. For starters, the sponsors of the Senate legislation never considered restricting the scope of the section 126(b) petition process. As introduced, the Senate bill, S.1630, maintained the original provision, section 110(a)(2)(E)(i), and section 126(b) without any modifications. S.1630, as introduced, *reprinted in* Comm. On Environment and Public Works, U.S. Senate, 103d Congress, 1st Sess., Legislative History of the Clean Air Act Amendments of 1990 (1993) [hereinafter "Legislative History of 1990 CAAA"], at 9060-61, 9148. The version of S.1630 that was adopted by the full Senate merely modified and renumbered section 110(a)(2)(E)(i) and changed the section 126(b) cross-reference accordingly. S.1630, as passed by Senate (April 3, 1990), *reprinted in* Legislative History of 1990 CAAA," at

4139-41, 4270. Likewise, H.R. 3030, as introduced, was intended by its sponsors to simply modify and renumber section 110(a)(2)(E)(i) and make a conforming change in the section 126(b) cross-reference. H.R. 3030, as introduced, *reprinted in* Legislative History of 1990 CAAA, at 3751-53, 3867.[11]

The cross-reference to section 110(a)(2)(D)(ii) arose relatively late in the congressional debate, as part of the version of H.R. 3030 passed by the House Energy and Commerce Committee. The House Committee bill renumbered section 110(a)(2)(E)(i) as 110(a)(2)D)(i). H. Rep. No. 101-490, Pt. 1, 101st Cong. 2d Sess. 48 (1990), *reprinted in* Legislative History of 1990 CAAA, at 3030. However, the cross-reference in section 126(b) was amended to read section 110(a)(2)(D)(ii). *Id.* at 3072. Significantly, the Committee Report's discussion of sections 110 and 126 does

[11]The manner in which H.R. 3030, as introduced, changed sections 110 and 126(b) helps clarify the intent of the bill's sponsors. As introduced, H.R. 3030 renumbered section 110(a)(2)(E)(i) as 110(a)(2)(D)(4). H.R. 3030, as introduced, *reprinted in* Legislative History of 1990 CAAA, at 3752-53. The cross-reference in section 126(b) was modified to refer to section 111(a)(2)(D)(4), a provision (in the section addressing new source performance standards) that was not in existing law nor proposed by the bill. *Id.* at 3867. EPA believes that the most logical interpretation of the bill's ambiguous cross-reference to section 111(a)(2)(D)(4) is that Congress meant to refer to 110(a)(2)(D)(4). Based on this interpretation, EPA believes that the sponsors of H.R.3030 did not intend to limit the section 126(b) State petition process.

not mention the cross-reference or provide any indication that the Committee intended to fundamentally restrict the pre-existing section 126(b) State petition process. *Id.* at 218, 274, *reprinted in* Legislative History of 1990 CAAA" at 3242, 3298.

In contrast, Congress clearly indicated that the Amendments were designed to increase EPA's ability to address interstate air pollution. For example, S.1630, as passed by the Senate, included various amendments to section 110 that "strengthened" provisions in existing law requiring SIPs to take into account the effect of emissions on other States.[12] S. Rep. No. 101-228, 101st Cong. 2d Sess. 19 (1989), *reprinted in* 1990 U.S.C.C.A.N. 3385, 3405. The House Conference Report notes that the amendments sought to "enhance the enforcement authority of the Federal government

[12]S.1630, as enacted by the Senate, expanded section 126(b) by allowing States to petition about "groups of sources" in addition to "any major source." Similarly, the bill expanded the scope of section 110 beyond stationary sources to include "any source or other type of emissions activity." The bill also modified the standard for showing that the downwind state is harmed by pollution transport by changing the language from amounts which will "prevent attainment or maintenance by any other State" to amounts which will "contribute significantly to nonattainment in, or interfere with maintenance by, any other State." Finally, Congress expanded the prohibition to require SIPs to insure compliance with international pollution abatement requirements under section 115, as well as interstate pollution abatement requirements under section 126. *See* S. Rept. 101-228 (to accompany S. 1630), 22, *reprinted in* Legislative History of 1990 CAAA, at 4140, 4270.

under the Clean Air Act," including "EPA enforcement authority regarding violations of State Implementation Plans." H. Rep. No. 101-952, 101st Cong. 2d Sess. 347 (1990), *reprinted in* 1990 U.S.C.C.A.N. 3385, 3879. Similarly, the conference report from the Senate managers states that the bill amends section 126 "to strengthen to [sic] prohibitions on emissions that result in interstate pollution." Chaffee-Baucus Statement of Senate Managers, S.1630, *reprinted in* Legislative History of 1990 CAAA, at 880, 886.

Where Congress considered changes to the section 126(b) State petition process, it did so explicitly. For example, Congress specifically amended section 126(b) to add the phrase "or group of stationary sources" after the phrase "major source," thereby expanding the scope of the State petition process. Pub. L. No. 101-549, §109, 104 Stat. 2469 (1990) *reprinted in* Legislative History of CAAA, at 483. In contrast, EPA cannot find -- and the commenters do not point to -- any discussion of the effect of the cross-reference to section 110(a)(2)(D)(ii). In light of Congress' silence, EPA believes that it is more reasonable to interpret the cross-reference as a scrivener's error than to believe that Congress intended to make such a significant change in the section 126(b) State petition process by surreptitiously

altering the cross-reference. *See In re Chateaugay Corp.*, 89 F.3d at 953 (“where it appears plain that an error in drafting has occurred, so that a literal construction would make a dramatic change in long-standing law, it is both sensible and permissible for judges to consider, in conjunction with other factors, Congress' complete silence on the literal effect of the change”).

The EPA received several comments suggesting that other interpretations of section 126(b)'s cross-reference to section 110(a)(2)(D)(ii) were plausible. As discussed below, EPA finds these theories unpersuasive. Nevertheless, even if a possible explanation for the cross-reference could be advanced, EPA retains the discretion to determine what, in fact, Congress intended. *See U.S. Nat’l Bank of Oregon v. Independent Insurance Agents of America*, 508 U.S. 439, 461 n.10 (1993) (holding that, although plausible reasons to explain Congress’ drafting choices can be developed, “the best reading of the [Federal Reserve] Act, despite the punctuation marks, is that Congress did something else”).

Some commenters suggested that Congress intended to replace the section 126(b) State petition process with the new interstate transport provisions of sections 176A and 184, or, alternatively, that Congress required EPA to have a recommendation from a transport commission established under

sections 176A or 184 before acting on a section 126(b) petition. Proponents of this theory speculate that the cross-reference to section 110(a)(2)(D)(ii) may have been a deliberate step to achieve this result. The EPA believes that the better reasoned view is that Congress intended sections 176A and 184 to supplement the existing authorities provided to address interstate transport in sections 126(b) and 110. As discussed in greater detail above in Section II.A.1, this interpretation gives full effect to all four statutory provisions. *See Alabama Power Co. v. EPA*, 40 F.3d 450, 455 (D.C. Cir. 1994) (a statute "is to be interpreted to give consistent and harmonious effect to each of its provisions"). In addition, there is no statutory language indicating that sections 126(b) and 110(a)(2)(D)(i) are superseded by sections 176A or 184 or that all four provisions do not remain in effect. Rather, the legislative history demonstrates that Congress intended to strengthen EPA's authority to address the problem of interstate pollution and there is nothing to indicate that Congress envisioned sections 176A or 184 as the exclusive mechanism by which to address these issues. *See* S. Rpt. 101-228 (on S.1630), Legislative History of 1990 CAAA, at 8391 ("A regional ozone transport commission is one important way to address these problems identified by modeling and

monitoring”). As a result, EPA reads section 176A and 184 as supplementing, rather than limiting, the section 126(b) State petition process.

The EPA also received a comment that, if there was a drafting error, it is at least as plausible that Congress intended to refer to section 110(a)(2)(D)(i)(II), which requires SIP provisions to prevent significant deterioration of air quality or to protect visibility. Another commenter argued that the cross-reference was a deliberate statutory change to limit the section 126(b) petition process to implementation of the notification requirements of section 126(a). The legislative history, however, fails to provide any evidence to support either theory. Rather, it is more plausible that Congress was silent on the issue because the change in cross-reference was an unintended scrivener’s error. Further, EPA’s interpretation that Congress did not intend to limit the pre-existing section 126(b) State petition process is a more narrow statutory interpretation than the theory that Congress intended to limit section 126(b) to either the prevention of significant deterioration and visibility provisions of section 110(a)(2)(D)(i)(II) or the notification requirements of section 126(a). *See Mova Pharmaceutical Corp.*, 140 F.3d at 1068-69 (remanding an FDA rule for a “more narrow solution” because, “when [an] agency

concludes that a literal reading of a statute would thwart the purposes of Congress, it may deviate no further from the statute than is needed to protect congressional intent"). Finally, as noted previously, even if either theory were as plausible as EPA's interpretation, the Agency remains responsible for determining what Congress actually meant. *See U.S. Nat'l Bank of Oregon v. Independent Insurance*, 508 U.S. at 461 n.10.

Other commenters observed that Congress has chosen to leave the statute as enacted in 1990, rather than amend the cross-reference in section 126(b). However, the post-enactment legislative history sheds no light on whether the 101st Congress intended to restrict the section 126(b) State petition process. There could be a host of potential explanations for congressional inaction, ranging from ignorance of the mistaken cross-reference to concern about reopening the CAA and unraveling the broad compromise reached in the 1990 Clean Air Act Amendments. As a result, EPA finds this argument unpersuasive.

The EPA received comments claiming that the Agency must obtain a judicial ruling before interpreting section 126(b) as a scrivener's error. Other commenters suggested that the only lawful route would be for EPA to request that Congress revise the Act. The EPA does not believe that either

approach is required. Rather, based on the doctrine of scrivener's error, courts have repeatedly affirmed interpretations by federal agencies that deviate from a statute's literal text when necessary to effectuate Congress' purpose. *See Chemical Manufacturers Ass'n v. Natural Resources Defense* Council, 470 U.S. 116, 125-26 (1985) (upholding EPA's interpretation that statutory language forbidding EPA to "modify" national standards for the discharge of toxic water pollutants did not preclude the Agency from issuing individualized variances because a literalistic reading of the statute would "make little sense"); *Environmental Defense Fund v. EPA*, 82 F.3d at 468 (affirming EPA's interpretation of section 176(c) of the Clean Air Act to avoid "absurd or futile results").

The EPA also received comments arguing that the Agency unlawfully prejudged this issue by adopting the scrivener's error theory as the basis for the consent decree in *State of Connecticut v. Browner* , No. 98-1376 (S.D.N.Y. 1998), which requires EPA to take final action on at least the technical merits of the section 126(b) petitions by April 30, 1999. However, paragraph 10 of the consent decree expressly leaves open all "issue[s] regarding the substance and timing of any remedy that EPA may or should require in response to the Section 126 petition," including EPA's final interpretation

of section 126(b). *State of Connecticut v. Browner* , No. 98-1376 (S.D.N.Y. Oct. 27, 1998) (stipulation and order approving consent decree). Thus, under the consent decree, EPA retained the discretion to deny the section 126(b) petitions on the ground that the Agency lacked statutory authority to entertain them in the first place. *Accord Croning v. Browner*, 898 F. Supp. 1052, 1062 (S.D.N.Y. 1995) (language in consent decree requiring EPA to take final action on regulations did not preclude EPA from determining that "regulations are not called for"). The Agency has undertaken a full notice and comment rulemaking process and has appropriately considered the comments submitted in reaching its final decisions. As a result, EPA is entitled to the traditional "presumption of regularity [that] supports the official acts of public officers." *United States v. Chemical Foundation, Inc.*, 272 U.S. 1, 14 (1926).

Some commenters suggested that EPA's proposed interpretation is contrary to an Agency policy on typographical errors in the 1990 Clean Air Act Amendments. The commenters cite to statements made during a 1993 rulemaking on acid rain allowance allocations.[13] These

[13] EPA stated that the Agency "acknowledged the redundancy in section 404(e) [of the Clean Air Act] as enacted, but believes that the section is clear as to the eligibility requirements. Therefore the Agency must follow the statute as enacted." 58 Fed. Reg. 15,634 15,642 (March 23, 1993).

statements addressed only a narrow issue involving the statutory interpretation of section 404(e) and did not purport to establish an Agency-wide policy. Furthermore, unlike the issue at hand, EPA determined that section 404(e) was "clear" for purposes of the rulemaking. Acid Rain Allowance Allocations and Reserves Final Rule, 58 Fed. Reg. 15,634 15,642 (March 23, 1993). In contrast, EPA believes that the literal text of section 126(b) and 110 is ambiguous and would create absurd results. As a result, EPA's determination that section 126(b) contains a scrivener's error is consistent with all relevant Agency policy.

In sum, the cross-reference to section 110(a)(2)(D)(ii) is ambiguous at best. A literal reading of the cross-reference is impossible since section 110(a)(2)(D)(ii) does not contain a prohibition and such an interpretation would contradict the statute's logic and structure. Further, there is no indication that Congress, in renumbering sections 126(b) and 110, intended to change the section 126(b) State petition process. The evidence indicates, in contrast, that Congress wanted to enhance EPA's ability to address interstate air pollution. As a result, EPA believes

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In a background document, EPA further stated that "EPA accepts the statutory text as written and believes that it does not have the authority to make the change suggested by the commenter." EPA Response to Public Comment on Proposed Acid Rain Allowance Allocation Rule, EPA Docket No. A-92-06, Doc. No. V-C-1, at 124 (March 1993).

that its interpretation is permissible because it resolves the ambiguity in the interplay between sections 126(b) and 110(a)(2)(D) in a manner that harmonizes and gives meaning to all of their provisions and reasonably accommodates the purposes of the provisions. *See Chevron, U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 844 (1984).

3. Interpretation of Emits in Violation of the Prohibition of Section 110 and Integration of Section 126 Controls with SIPs/FIPs Under the NOx SIP Call

a. Interpretation of Emits in Violation of the Prohibition of Section 110

In the section 126 proposed rule, EPA explained its position on how section 126 should be interpreted in coordination with section 110(a)(2)(D), and specifically, how the Agency should act on the section 126 petitions in light of the NOx SIP call. See 63 FR 56301-3. As proposed, EPA is structuring its final action to contain: (1) a series of "technical determinations" as to which sources in which States named in the petitions would emit in violation of the section 110 prohibition if the State or EPA were to fall off track in putting a timely and satisfactory plan in place pursuant to the NOx SIP call; (2) determinations that the petitions will automatically be deemed granted or denied on the basis of certain specified events and timing related to

state submissions and EPA approvals of SIP revisions submitted in response to the NOx SIP call, as well as EPA promulgations of federal implementation plan provisions; and (3) the remedial requirements that will apply to the sources receiving affirmative technical determinations if a petition naming those sources is ultimately deemed granted.

Numerous parties have commented on the relationship of the section 126 petitions to the NOx SIP call. One set of commenters generally argues that action under the NOx SIP call does not necessarily satisfy the requirements of section 126 and asserts that EPA should not dismiss the section 126 petitions until sources have actually reduced emissions. Several commenters assert that implementation of the NOx SIP call rule either by the states in their SIPs or by EPA in FIPs precludes a positive finding under §126. Another commenter argues that it would be inconsistent with the NOx SIP call for EPA to make any determinations regarding the prohibition of section 110(a)(2)(D)(i) other than a determination that the prohibition is not being violated by any source in any state that is subject to the SIP call. The EPA continues to believe that its approach, and the underlying interpretation of sections 110(a)(2)(D)(i) and 126, is the most appropriate way to interpret and reconcile the two provisions, for the reasons

explained in the proposal and further detailed below.

Section 126 calls for relief where EPA finds that sources are emitting "in violation of the prohibition" of section 110(a)(2)(D)(i). The language of section 126 on its face, however, is ambiguous as to what it means for a source to emit in violation of the prohibition of section 110(a)(2)(D)(i).

Some commenters argue that there can be no violation of the prohibition of section 110(a)(2)(D)(i) unless the upwind state SIP contains an emission limit that implements the requirement of section 110(a)(2)(D)(i) and the source is violating that limit. In support of this interpretation, the commenters point to section 126(c), which states that "it shall be a violation of this section and the applicable implementation plan in such State" for a source to operate in violation of the prohibition of section 110(a)(2)(D) or section 126. The commenters also argue that this interpretation makes sense in light of the short time frame for EPA action under section 126, consistency with section 110 and other provisions, and consistency with the remedy under section 126(c).

Other commenters appear to believe that the existence of an emissions limit in a SIP implementing section 110 is irrelevant. They (either explicitly or implicitly) take the

position that EPA may find that a source is emitting in violation of the prohibition of section 110(a)(2)(D)(i) for any source that is contributing significantly to nonattainment or interfering with maintenance downwind if either: (a) the SIP fails to limit those emissions, or; (b) the SIP limits the emissions, but the source is violating those limits.

The EPA does not agree with either of these interpretations. Rather, EPA interprets section 126 to provide that a source is emitting in violation of the prohibition of section 110(a)(2)(D)(i) where the applicable SIP fails to prohibit (and EPA has not remedied this failure through a FIP) a quantity of emissions from that source that EPA has determined contributes significantly to nonattainment or interferes with maintenance in a downwind state. Several commenters support EPA's approach.

The ambiguity of the language of section 126 raises at least three related questions. The meaning of "emit in violation of the prohibition" is ambiguous. As a consequence, it is not clear how Congress intended sections 110(a)(2)(D)(i) and 126 to work together under the CAA, and specifically, it is unclear how an approved SIP provision implementing section 110(a)(2)(D)(i) or compliance with a SIP call to implement section 110(a)(2)(D)(i) affects

section 126 petitions alleging that sources are emitting in violation of the prohibition of section 110(a)(2)(D)(i).

The EPA believes that there are several key factors to consider in attempting to resolve these questions. First, of course, is the language of the provisions, to the extent that it can be read to support one interpretation over another. A second key consideration is the purpose of section 126 in light of the problem it was designed to solve as indicated by the legislative history. Third, it is appropriate to take into account the existence of other provisions in the CAA and to interpret sections 126 and 110(a)(2)(D)(i) in a manner that gives those sections full force and effect, without creating redundancy with any other provision. Finally, in analyzing the role of direct controls on sources through section 126 findings vis-a-vis controls on sources through SIPs, it is useful to consider how these two different mechanisms fit into the federal-state system for air pollution control established under Title I. Taking all of these considerations into account, EPA believes that the best interpretation of section 126 is that it authorizes a downwind state to petition EPA to control emissions from upwind sources where the upwind SIP is inadequate to comply with the requirements of section 110(a)(2)(D)(i), but that where the SIP establishes adequate

controls on interstate transport and a source is violating those requirements, the appropriate remedies are provided in sections 113 and 304 of the Act, not section 126.

Focusing first on the language of the provisions, EPA believes that it is reasonable and appropriate to interpret the prohibition of section 110(a)(2)(D)(i) as a prohibition on emission of a quantity of pollutants that would contribute significantly to nonattainment in or interfere with maintenance by another state. In essence, it is a prohibition on excessive interstate transport of air pollutants. The state is responsible for implementing the prohibition by barring such excessive emissions in the SIP. Thus, EPA believes a reasonable interpretation is that where the state has failed to implement the prohibition, the SIP allows excessive transport of pollutants, the prohibition is violated, and a source emitting such quantities of pollutants is emitting in violation of the prohibition.

Where the state has adopted SIP provisions barring such emissions, but the source is violating those limits, it is less clear whether the prohibition on excessive interstate transport has been violated and hence whether the source is in violation of the prohibition. The EPA believes it is most reasonable to read section 126 not to encompass this situation, for the reasons explained below.

The EPA also rejects the more restrictive interpretation that section 126 **only** applies where a state has adopted SIP provisions to control interstate transport of pollutants, EPA has approved those SIP provisions, and sources are violating those provisions. Section 110(a)(2)(D)(i) itself does not directly establish any emissions limitations applicable to a particular source. The emissions limitations on which the commenters are focusing are the requirements of the **SIP**, not of section 110(a)(2)(D)(i). Looking just at the specific language of the two provisions, EPA believes that the better interpretation of the language of section 126 is that it refers to the actual functional prohibition of section 110(a)(2)(D)(i), which bars impermissible interstate transport, rather than the specific provisions through which states implement that prohibition, the emissions limitations for individual sources contained in an approved SIP. As explained above, a source would be in violation of the prohibition of section 110 where the applicable SIP failed to bar excessive interstate transport of air pollutants. EPA believes that its interpretation is a reasonable reading of the reference in section 126 to emitting in violation of the prohibition of section 110, and in light of the ambiguity of the statutory language, EPA's interpretation is

subject to deference under *Chevron*.

The clear purpose of section 126 is to provide a tool for downwind states to achieve reductions in interstate pollution transport. See discussion above in section II.A.1. The history and current manifestation of interstate pollution problems emphasize that such a tool is needed to address the situation where upwind states have not designed their SIPs to account for the effects of emissions from sources in those states on downwind areas. See discussion in Sections II.A.1. and I.B. In short, as Congress recognized in adopting all of the interstate transport provisions in the CAA, the interstate pollution problem stems from inadequate SIPs, not inadequate compliance with adequate SIP requirements. This characterization of the problem is supported by the numerous descriptions of the interstate pollution problem in the 1977 and 1990 legislative histories, all of which explicitly or implicitly refer to the lack of upwind limitations and none of which mentions sources' violation of upwind SIP limits.[14]

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[14]*See, e.g.*, S. Comm. on Envt. and Public Works, Clean Air Act Amendments of 1977, S. Rep. 95-127, 95th Cong., 1st Sess. 41 (1977), *reprinted in* 3 1977 Legislative History, 1415 (noting that the 1970 Act failed to specify any abatement procedure if a source in one state emitted air pollutants that adversely affected another state, and "[a]s a result, no interstate enforcement actions have taken place, resulting in serious inequities among several States, where one State may have more stringent implementation plan

Furthermore, it is reasonable to assume that Congress intended to create a tool that would attack the problem Congress recognized. This supports the conclusion that Congress intended section 126 to apply where upwind states' SIPs are inadequate, not (and certainly not only) where sources are violating adequate SIP provisions.

The EPA's interpretation is also consistent with Congress' explanation of section 126 in the legislative history. In the course of adopting the 1990 Amendments, the Senate Committee described section 126 as allowing a downwind state to complain about "a defect in the offending State's SIP." Senate Committee Report, 75-76, Leg. Hist. V. 8415-8416. A source's violation of adequate SIP requirements is certainly not synonymous with a defect in the SIP itself.

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requirements than another State;" H. Rep. 95-294, 95th Cong., 1st Sess. at 331 (1977), *reprinted in* 4 1977 Legislative History at 2798 ("This petition process is intended to expedite, not delay, resolution of interstate pollution conflicts."); S. Rep. 101-228 at 48, *reprinted in* V 1990 Legislative History at 8388 ("The transport problem in the northeast, and perhaps other regions as well, is serious enough that additional efforts must be made on an interstate basis to control emissions, including emissions from attainment areas."); *Id.* at 49, 8389 ("The model suggests that even if all emissions sources were eliminated within the tri-state area [New York, New Jersey and Connecticut], violations of the ozone standard would still occur. This means substantial reductions in emissions from areas upwind from the New York metropolitan area must be achieved if this area is to attain the air quality standards.").

In addition, there is little or no purpose to establishing a process for downwind states to petition EPA to find that upwind sources are violating their SIP requirements because other sections of the Clean Air Act provide ample authority for states, citizens and EPA to directly enforce approved SIP provisions against sources violating those provisions. This objection applies even more forcefully against the most limited interpretation advocated by some commenters, in which the sole purpose of the petition process under section 126(b) and (c) is to allow states to petition EPA to find that a source is violating its emissions limitations under an approved SIP. Upon making such a finding, EPA could then allow the source up to three years to come into compliance with its emissions limitations. Yet there is no need to have a petition, public hearing, and EPA determination simply to enforce existing SIP limits, as the CAA elsewhere provides a quite sufficient and much simpler set of remedies for violation of an approved SIP provision. Under section 113, upon finding that any person is in violation of any requirement of an approved SIP, EPA has the authority to enforce the requirement by issuing an order to comply, issuing an administrative penalty order, or bringing a civil action. In addition, any person (which includes states) may bring a

citizen suit against any person in violation of any requirement of an approved SIP. Section 304(a), (f); see also section 302. These provisions provide more direct and likely quicker recourse against a source that is violating its SIP-imposed emission limits. In bringing suit under the citizen suit provisions, a state could act independent of EPA action. Moreover, these tools for enforcement of SIP requirements were available under the 1977 Clean Air Act, which contained both sections 113 and 304 in substantively similar form to the present versions. In adopting section 126 in 1977 and strengthening it in 1990, Congress clearly intended the petition process to play a significant role in addressing the interstate pollution problem. See discussion above in section II.A.1. To the extent that section 126 is used to enforce SIP violations, the petition process would not be serving such a role. Furthermore, under the commenters' most limited interpretation, the petition process would instead provide no authority at all to address interstate pollution beyond what is already provided elsewhere in the Act through arguably more effective mechanisms. In contrast, using the section 126 petition process where a state has failed to adopt adequate SIP provisions serves the unique role of allowing a downwind state to force EPA consideration of the problem and

potentially achieve emissions reductions directly from sources, without the need to depend on action by the upwind state.

In determining how Congress intended section 126 to operate both in the absence of an adequate SIP and when a state is complying with the section 110 SIP requirements, it is also important to consider the role under Title I of state planning and control efforts in the form of SIPs, versus imposition of direct federal controls. In Title I of the Act, Congress has established a cooperative federalism approach in which air pollution planning and control occurs largely at the state level. Under Title I, states are primarily responsible for determining the mix of control measures necessary to achieve the NAAQS, while the federal government sets the uniform national goals and ensures that states act to meet them. ***Train v NRDC***, 421 U.S. 60 (1975). Section 126 is somewhat unusual in Title I in that it authorizes EPA to control sources directly, rather than providing a means for EPA to encourage states to control those sources. In that sense, it is similar to the provisions for federal implementation plans in section 110(c). With both of these provisions, Congress provided tools for direct federal action to address serious failures of state action. Nevertheless, Congress' clear preference

throughout Title I is that states are to decide and plan how they will control their sources of air pollution, and the mechanism for imposing those controls at the state level is SIPs. As noted above, states, EPA and citizens have the authority to directly enforce violations of an approved SIP. Thus, where a SIP is adequate but a source is violating its provisions, it would be counter to the cooperative federalism structure of the Act and would serve no purpose to essentially replace those adequate SIP limits with redundant direct federal controls on a source. In contrast, where a state has failed to adopt adequate SIP provisions in the first place, it makes sense to provide an alternative mechanism to directly achieve the necessary emissions reductions from the sources. A state would always be free to regulate the sources itself in that instance by revising its SIP to include the necessary emission limits. EPA believes that this understanding of Congress' overall design for air pollution control supports EPA's interpretation that section 126 is intended to be used only to address the situation where the SIP fails to prohibit sources from emitting impermissible amounts of transported air pollutants. Thus, under this view, a source is emitting in "violation of the prohibition of" section 110(a)(2)(D)(i) under section 126 when the applicable SIP fails to limit the

emissions prohibited under section 110(a)(2)(D)(i).

In support of the most limited interpretation that there is no violation of the prohibition absent an approved SIP provision limiting the source's emissions, commenters point to the language of section 126(c), which states that "it shall be a violation of this section and the applicable implementation plan in such State" for a source to operate in violation of the prohibition of section 110(a)(2)(D) or section 126. They claim that the reference to a violation of a SIP supports the interpretation that section 126 only applies where there is an approved SIP provision in place. However, if a source is emitting in violation of an emission limitation in a SIP, there is no question that the source is in violation of the SIP. The language in section 126 stating that "it shall be a violation of ...the applicable implementation plan" for a source to emit in violation of the prohibition of section 110(a)(2)(D) serves no legal purpose where the source is already directly violating a SIP requirement. In contrast, under EPA's interpretation, section 126 deems a source's emissions to be a violation of the applicable SIP (as well as of section 126) where the SIP itself does not bar the source's emissions but the emissions significantly contribute to nonattainment downwind. This interpretation gives legal effect to the language in section

126 and is consistent with Congress' purpose of providing a tool for downwind states and EPA to use to impel upwind sources to reduce transported emissions.

Nor does EPA agree with the commenter's argument that EPA's interpretation is inconsistent with the remedy under section 126(c). The commenter asserts that because a source must comply within three months of a finding or cease operating, the remedy makes no sense in the absence of an approved SIP provision. However, section 126(c) also provides that the three month deadline only applies if EPA does not establish an alternative schedule for the source to come into compliance. EPA may give a source up to three years to comply with the prohibition in section 110(a)(2)(D), as long as the source meets emissions limitations and compliance schedules containing increments of progress set by EPA. The commenter fails to explain why this scheme "makes no sense." In EPA's view, up to three years for compliance is generally a reasonable amount of time that should not unduly burden sources and is consistent with the timeframes for implementation of many federal and state air pollution requirements. This is a perfectly rational, if potentially stringent, means of assuring continued progress on something that Congress viewed as a serious pollution problem.

Commenters also assert that their interpretation is the only interpretation that is consistent with section 110(a)(2)(D)(i) and other provisions of the Act. They argue that states have the primary responsibility for regulating their sources under section 110, and if the states fail to do so, EPA's recourse is provided in sections 110(k) (allowing EPA to call for revision of an inadequate SIP), 110(m) (allowing EPA to impose sanctions) and 110(c) (allowing EPA to promulgate a Federal implementation plan). EPA emphatically agrees that a SIP call under sections 110(a)(2)(D)(i) and 110(k)(5) is an alternative means for EPA to address interstate pollution transport. However, commenters overlook the unique role of section 126, which is designed to provide recourse to downwind states where both upwind states and EPA have failed to act. As discussed above, no progress had been made on interstate transport problems at the time of enactment of both the 1977 and 1990 Amendments. Section 126 provides a tool for downwind states, the entities with most at stake, to force EPA to confront the issue directly. It also sets up an abbreviated, and hence potentially faster, process to achieve emission reductions. Under the SIP process, EPA must direct a state to revise its SIP to comply with 110(a)(2)(D), and then perhaps find that the state has

failed to comply, impose sanctions, and finally promulgate a Federal implementation plan, all of which could potentially stretch out for many years. In contrast Congress required very expeditious EPA action on a petition and from three months up to three years for sources to comply. It is perfectly reasonable for Congress to have established section 126 as an alternative mechanism under the Clean Air Act to address the interstate pollution problem, just as it did again in adopting sections 176A and 184. To provide alternatives, the various interstate transport provisions are necessarily different from each other and from other provisions of the Act, but that does not make them inconsistent with other provisions of the Act.

Finally, commenters argue that their interpretation makes sense because Congress only gave the Agency 60 days after receipt of the petition to hold a public hearing on the petition and act to grant or deny the petition. They assert that this short time frame indicates that Congress anticipated the decision would be a fairly simple administrative task of determining whether a source is violating a SIP requirement. EPA views the significance of these requirements differently. First, the requirement to hold a hearing bolsters EPA's interpretation of section 126 because a hearing would serve no purpose here under the

commenter's interpretation. Whether a source is violating an emission limitation is a straightforward compliance determination. EPA makes such determinations on a daily basis without going through a public hearing process, and such a process would provide no benefit. Second, the short time frame for a determination is an indication of Congress' intent to produce action on the interstate pollution issue. In section 307(d)(10) of the Act, Congress expressly provided a generic time extension for EPA action on certain rules listed under section 307 to address the possibility that some of the deadlines under the Act might be too short to allow EPA to complete the rulemaking process. This indicates that Congress did not necessarily link short deadlines for action under section 307(d) with less complex or substantive proceedings, and where a short deadline may threaten the integrity of the rulemaking process, Congress was willing to extend the deadline. A short deadline for EPA action corresponds better with Congress' assessment of the urgency of the problem than the time needed by EPA to carry out the mandate, and thus such a deadline should not be assumed to signal a simple task for the Agency.

A commenter also stated that "[i]n the NPR, EPA acknowledges that the section 126 language requires a violation of a SIP provision implementing section

110(a)(2)(D)(i) before a section 126 finding can be made. 63 Fed. Reg. at 56302." EPA is not certain to which particular statement the commenter is referring. The commenter may be referencing out of context the last clause of a sentence describing EPA's rationale for not granting a petition if either the State is adhering to the NOx SIP call schedule for submission of an approvable SIP revision and EPA is acting speedily to approve the SIP, or if EPA has promulgated a FIP for the State. EPA's statement regarding whether a source "emits or would emit in violation of the prohibition" alluded to how EPA should interpret section 126 in light of the interplay with the NOx SIP call under section 110(a)(2)(D). EPA rejects the notion that any statement in the NPR constitutes the "acknowledgment" claimed by the commenter.

Overall, commenters advocating the most limited interpretation would reduce what is perhaps the most powerful tool in the Clean Air Act to address interstate pollution to a redundant mechanism to enforce limitations that states have already included in their SIPs. Under their interpretation section 126 is a tool to fix a nonexistent problem. No commenter on the NOx SIP call or this section 126 rulemaking has claimed that the northeastern ozone problem is due in any part to sources'

noncompliance with emission limitations contained in upwind states' SIPs. The commenters' interpretation of section 126 does not comport with Congress' aim of establishing and strengthening a means for downwind states to enlist EPA's assistance to require the upwind reductions needed for the downwind states to meet air quality standards.

b. Integration of Section 126 Controls with SIPs/FIPs Under the NOx SIP Call

EPA's interpretation of "emitting in violation of the prohibition" provides direction for how EPA should act on the section 126 petitions in light of the NOx SIP call, as for both actions EPA is operating on basically the same set of facts regarding the same pollutants and largely the same amounts of upwind reductions affecting the same downwind states. First, it follows that if a state had already adopted a SIP revision in response to the NOx SIP call providing for sources to reduce their emissions at a future date and EPA had approved the revision as adequate to meet the requirements of section 110(a)(2)(D)(i), EPA would not find that a source in that state was emitting in violation of the prohibition of section 110(a)(2)(D)(i).[15] Similarly,

[15]Of course, compliance with a SIP call based on section 110(a)(2)(D)(i) only means that a state has adequately prohibited excessive emissions of transported pollutants for the particular set of facts analyzed under the SIP call. For example, if a downwind state that had not been considered a recipient of an upwind state's emissions

if a state had failed to adopt a SIP revision in response to the NOx SIP call and EPA had responded with a FIP, the FIP would bar the excessive emissions of transported pollutants and hence sources in the state would not be emitting in violation of the section 110 prohibition. EPA believes it also follows that if states are currently subject to a schedule for compliance with a SIP call to correct an inadequacy under section 110(a)(2)(D)(i), and states have not yet slipped off track in terms of compliance with the schedule, it is appropriate for EPA to defer making a finding as to whether sources in the state are emitting in violation of the prohibition of section 110(a)(2)(D)(i).

The premise of the NOx SIP call is that a number of state SIPs fail to limit emissions to prevent the excessive interstate pollution transport prohibited by section 110(a)(2)(D)(i). The purpose of the NOx SIP call is to require the states to revise their SIPs to comply with section 110(a)(2)(D). Pursuant to the NOx SIP call, there is an explicit and expeditious schedule for states to meet their section 110(a)(2)(D)(i) obligations. EPA has also

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subsequently brought a petition under section 126, or a downwind state that had been considered a recipient under the SIP call produced new data showing a different level of contribution or other new facts, compliance with the earlier SIP call would not be determinative regarding whether the upwind sources were emitting in violation of the prohibition of section 110(a)(2)(D)(i).

proposed a FIP to bar the excessive emissions of transported pollutants for each state that fails to meet the schedule established in the NOx SIP call, and EPA could finalize the FIP by November 30, 1999. As long as both states and EPA on track in terms of complying with the substance and timing of the NOx SIP call, EPA believes it is appropriate to interpret section 126 to allow EPA to defer making a finding with respect to sources in those states.

It further follows that once a state has missed a deadline under the schedule and EPA has not corrected the SIP inadequacy with a FIP, it is reasonable to find at that point that sources in the state are emitting in violation of the prohibition because the applicable SIP fails to limit interstate transport and the state has failed to correct the inadequacy in the timeframe established under the SIP call. It also follows that EPA could not find that sources in the state are not emitting in violation of the prohibition of section 110(a)(2)(D)(i) and deny the petitions now simply because EPA has issued a SIP call, as one commenter suggests. The key criterion under EPA's interpretation of sections 126 and 110(a)(2)(D)(i) is the existence of provisions in an applicable implementation plan to control interstate transport. Issuance of the SIP call with a schedule for correcting the deficiency is sufficient to

allow EPA to defer a final decision on granting or denying the petitions as long the states have not missed a deadline under that schedule. It is not a sufficient basis, however, on which to assume that the required provisions controlling interstate transport will necessarily be adopted by the state or EPA within the required timeframe, and hence to assume that sources are not emitting in violation of the prohibition of section 110.

EPA believes that it is reasonable to make technical determinations at this time that absent timely action under the NOx SIP call, sources covered by the petitions, which are in states subject to the SIP call, will emit in violation of the prohibition of section 110(a)(2)(D)(i). Hence, if states or EPA fail to act on the schedule established, the petitions will automatically be deemed granted, and if states and EPA meet the schedule established, the petitions will automatically be deemed denied. Specifically, today's action provides that for each source for which EPA has made an affirmative technical determination, EPA will be deemed to have found that the source emits or would emit NOx in violation of the prohibition of section 110(a)(2)(D)(i) under the following

circumstances.[16] First, the finding is deemed to be made for such sources in a state if by November 30, 1999, EPA has not either (a) proposed to approve a state's SIP revision to comply with the NOx SIP call or (b) promulgated a FIP for the state. Second, the finding is deemed to be made for such sources in a state if by May 1, 2000, EPA has not either (a) approved a state's SIP revision to comply with the NOx SIP call or (b) promulgated implementation plan provisions meeting the section 110(a)(2)(D)(i) requirements. Upon EPA's approval of a state's SIP revision to comply with the NOx SIP call or promulgation of a FIP, the corresponding portions of the petitions will automatically be deemed denied. Also, if a finding is deemed to be made, it will be deemed to be withdrawn, and the corresponding portions of the petitions will also be deemed to be denied, upon EPA's approval of a state's SIP revision to comply with the NOx SIP call or promulgation of a FIP. See Section II.B for further discussion of the basis for EPA's technical determinations.

This coordinated approach to addressing the overlapping section 126 petitions and the NOx SIP call is also a

[16]While these findings would be made automatically without further EPA action, EPA would promptly publish a notice in the *Federal Register* notifying affected sources and other interested parties that the findings had been made.

practical way to implement both of these provisions in the same time period, as the timing of the SIP call and the consent decree have required EPA to do here. Several commenters have suggested that EPA address coordination with the NOx SIP call through either retaining the section 126 petitions as a backstop until the SIP provisions are implemented (possibly by "staying" action on the petitions), or treating timely implementation of the FIP or SIP as alternative "increments of progress" under section 126. However, each of these approaches would raise practical problems by subjecting sources to differing emission control requirements -- e.g., one set from an approved SIP and the other from the section 126 remedy. This would be particularly problematic for sources in states that choose different control options from those selected by EPA under the section 126 petitions and could potentially significantly increase the overall burden of reducing interstate transport of pollutants under the NOx SIP call and the section 126 petitions.

The practical problems with the commenters' suggested approaches stem from the fact that the controls adopted by upwind states in their SIPs may well not be identical to the controls identified by EPA under section 126. The SIP may control different sources, and may impose looser, or no,

controls on at least some of the sources also covered by section 126. Accordingly, it may not be feasible to treat the SIP controls as increments of progress under section 126. In addition, if the SIP controlled different sources or imposed looser controls on the sources covered by section 126, the section 126 sources would still be obliged to implement the section 126 controls in time for the May 1, 2003 deadline. The section 126 sources would need to take this action because otherwise, if the sources covered under the SIP did not implement their SIP controls, the section 126 sources would be responsible for having their controls in place as soon as the SIP sources were determined not to be in compliance. Under this scenario, the overall burden of achieving the downwind reductions could be significantly higher than necessary because to the extent that the controls required under section 126 and the controls required under a SIP were nonidentical, sources would need to implement all of the nonidentical controls required by either section 126 or the SIP, even though implementation of either the set of section 126 controls or the set of SIP controls alone would be sufficient to eliminate emissions that contribute significantly to nonattainment or interfere with maintenance in downwind states. Furthermore, this potential inefficiency might be viewed as effectively

impermissibly pressuring states to adopt in their SIPs controls identical to the section 126 controls, as states might conclude that identical controls are necessary to minimize the overall compliance burden. As described elsewhere in today's notice, the courts have found that while EPA may specify a quantity of emissions reductions that states must achieve through SIP revisions, EPA may not specify the particular controls that a state must adopt.

A number of commenters have stated that EPA should not dismiss the section 126 petitions unless and until the quantity of transported air pollutants has been reduced, either through implementation of the SIP revisions adopted in response to the NOx SIP call or through implementation of a FIP. The commenters express the concern that under EPA's approach, if the upwind states, EPA, or sources go off track in terms of compliance with the NOx SIP call schedule, the downwind states will be unable to enforce the three year deadline for emissions reductions established by section 126.

For the reasons discussed above, EPA believes that the better interpretation of sections 110(a)(2)(D)(i) and 126 is that sources emit in violation of the prohibition of section 110(a)(2)(D)(i) only where the applicable SIP, SIP submission, or federal plan fails to bar the excessive

emission of transported pollutants prohibited by section 110(a)(2)(D)(i). Nor does EPA agree that its approach raises the problems cited by the commenters. First, EPA believes that it has carefully structured its actions on the petitions to avoid any problems associated with either the upwind states or EPA going off track with respect to the NOx SIP call schedule for adoption and approval of SIP revisions. By making technical determinations now and specifying the exact dates and circumstances under which the petitions would be deemed granted, EPA has structured today's action to ensure that if either the upwind states or EPA do not submit or promulgate the necessary plan provisions expeditiously under the NOx SIP call, the section 126 remedy will automatically be activated without any further action by EPA. Moreover, May 1, 2000 is the deadline for the upwind states and EPA to complete their necessary actions to avoid an automatic granting of the section 126 petitions. This provides ample time for sources subject to the section 126 controls to come into compliance by the May 1, 2003 deadline. Once the SIP revisions are adopted and approved, no further action is needed from the upwind states and EPA -- from that point on, the only way that emissions reductions would go off track is if the upwind sources failed to comply with their SIP limitations.

Moreover, the problem of potential bad actors exists regardless of whether EPA grants, retains (and somehow stays action on), or denies the section 126 petitions. Under any approach, it is possible that some sources may not meet the May 1, 2003 deadline for compliance with the SIP limitations, and thus, whether or not EPA has denied the section 126 petitions, there is a possibility that some portion of the upwind emissions will not be reduced within the three year period specified in section 126. If EPA has either retained or denied the petitions, the remedy is the same -- enforcement action against the source for failure to comply with a regulatory requirement embodied in an approved SIP. As discussed above, either downwind states or EPA could directly enforce the SIP limits against the source under section 304 or 113, respectively. If EPA grants the petitions, downwind states would additionally be able to enforce against sources for violation of section 126, as well as the SIP limits, but it is not clear that this would make any practical difference. It is not necessary for EPA to use the section 126 petitions as a backstop in case of potential bad actors, and attempting to do so would raise the practical problems discussed above. In addition to this analysis of the practical issues associated with granting or retention versus denial of the petitions upon approval of

the SIP revisions, such an approach would be inconsistent with what EPA believes to be the best reading of the statute, as discussed above. Moreover, with respect to the argument that EPA should retain the section 126 petitions as a backstop after approval of a SIP revision or promulgation of a FIP, EPA is uncertain as to what would constitute the statutory authority for such an approach.

c. Petitions Deemed Granted Upon Certain Events

A number of commenters objected to EPA's proposal that the section 126 petitions for which it has made affirmative determinations would be deemed granted under the circumstances specified above. Commenters asserted that EPA should withhold decisions regarding the section 126 petitions until it has had sufficient time to determine the adequacy of the SIPs submitted pursuant to the NOx SIP call, rather than providing that the section 126 remedy would be automatically triggered by certain dates. Commenters also argued that EPA must conduct a rulemaking to evaluate the technical merits of the section 126 petitions rather than setting up a mechanism whereby failure to take a final action by a deadline, and in particular, EPA's failure to act, constitutes a default to some pre-arranged decision. Commenters opined that EPA might delay its approval of SIP submissions in order to trigger granting of the section 126

petitions without providing for public comment on the section 126 finding in light of a state's SIP submission. As discussed above, EPA is finalizing the proposed approach, which EPA believes is based on the most reasonable interpretation of the relationship between sections 110(a)(2)(D)(i) and 126, and best coordinates actions under the overlapping NOx SIP call and section 126 petitions.

The EPA has provided ample public notice and opportunity to comment on the Agency's technical and legal determinations underlying today's affirmative determinations on the section 126 petitions. The EPA is determining through rulemaking that the sources subject to the affirmative determinations will emit in violation of the prohibition of section 110, absent timely state compliance with the NOx SIP call or promulgation of a FIP. Today's rule provides that the petitions will be granted if the Agency does not act to propose approval of and finally approve a SIP revision or promulgate federal implementation plan provisions satisfying the NOx SIP call. There is no legal requirement for EPA to conduct rulemaking to determine that the Agency has not proposed, approved, or promulgated implementation plan provisions by a given date, and such a rulemaking would serve no purpose. There is no benefit to providing for public comment on whether EPA has published a

specified notice by a specified date. EPA has established easily verified, purely objective criteria for triggering the granting of the petitions. Because EPA has provided for notice and comment on every aspect of the finding on the section 126 petitions, including on establishment of an objective criteria for when petitions are deemed to be granted, EPA has fully complied with the Clean Air Act and the Administrative Procedure Act requirements for notice-and-comment rulemaking.

EPA also rejects commenters' allegations that the Agency may deliberately or inadvertently miss the deadlines for proposed or final approval of SIP revisions submitted under the NOx SIP call. In the proposal and in the Response to Comments Document for this rule, EPA explains why it believes the schedule for action on the SIP revisions is reasonable and achievable. *See* 63 FR 56302-56303. Given achievable deadlines, there is no reason why EPA would deliberately miss them to impose the section 126 remedy in preference over states' plans. As discussed above, EPA believes that Congress generally intended states, not EPA, to be primarily responsible for imposing the controls required under Title I of the Act to meet the NAAQS. Moreover, EPA has attempted to coordinate its proceedings on the section 126 petitions and the NOx SIP call to provide

the maximum opportunity, consistent with EPA's interpretation of the statutory provisions, for states to address the interstate transport problem through their SIPs, rather than having EPA impose controls directly through a FIP or under section 126. Commenters argue that the section 126 petitions should not be granted if states have submitted a SIP revision purporting to comply with the NOx SIP call and EPA has either not acted on the revision, or has proposed approval but not acted to finally approve the revision. Yet such an approach would provide no assurance that there would be timely emission reductions either through an approved SIP, a FIP, or direct controls on sources. EPA's interpretation provides states and EPA a reasonable opportunity to address the interstate transport problem through approved SIP revisions, but ensures that the opportunity is not open-ended. Instead, EPA interprets the interplay of the two provisions to ensure that under one approach or the other, reductions will be achieved as expeditiously as practicable. EPA believes that this interpretation is reasonable and best achieves Congressional intent regarding the purpose and function of sections 126 and 110(a)(2)(D)(i).

B. EPA's Interpretation of Section 126: Significant Contribution

1. Significant Contribution Standard

a. NPR

In the NPR, EPA relied on the same multi-factor, weight-of- evidence test used in the NOx SIP call final rulemaking for determining whether emissions from upwind sources contribute significantly to nonattainment problems downwind.

As described in the NOx SIP call final rule, section 110(a)(2)(D)(i)(I)--

provides that the SIP must "prohibit[]" sources from "emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other State....[This provision requires] the elimination of ... those amounts of [upwind] emissions that, based on a multi-factor test, significantly contribute to downwind air quality problems.

63 FR 57,376.[17]

The EPA further stated, in the NOx SIP call final

[17] As indicated in the NOx SIP Call final rulemaking, EPA views the interfere-with-maintenance test to incorporate the same standards as the contribute-significantly-to-nonattainment test. 63 FR 57379.

rule, that the multi-factor test, in turn, weighs together seven factors. The first four were the "primary components in EPA's consideration," and EPA specifically considered them with respect to each upwind State:

- The overall nature of the ozone problem (i.e., "collective contribution")
- The extent of the downwind nonattainment problems to which the upwind State's emissions are linked, including the ambient impact of controls required under the CAA or otherwise implemented in the downwind areas
- The ambient impact of the emissions from the upwind State's sources on the downwind nonattainment problems
- The availability of highly cost effective control measures for upwind emissions.

63 FR 57376. In the NOx SIP call final rule, in the context of applying the weight-of-evidence test to the New York City nonattainment area as an example, EPA further indicated the manner in which these primary factors were combined and considered:

The extent of New York City's nonattainment problem and the nature of the contributions from upwind States were considered in determining whether the values of the metrics indicate large and/or frequent contributions for individual upwind States. Specifically, additional controls beyond the local and upwind NOx reductions which are part of the regional NOx strategy may be needed to solve New York City's 1-hour nonattainment problem. Also, the total contribution from all upwind States is large and there is no single State or small number of States which comprise this total upwind portion. In this regard, the contributions to New York City from some States may not appear to be individually "high" amounts. However...these contributions, when considered together with the contributions from other States (i.e., the collective contribution) produce a large total contribution to nonattainment in New York City.

63 FR 57,392.

In addition, EPA stated, in the NOx SIP call final rule, that the multi-factor test included three other factors, as follows:

In addition, EPA generally reviewed several other considerations before concluding that upwind emissions contribute significantly to downwind nonattainment. The EPA did not consider it necessary, or did not have adequate information, to apply each these factors with specificity with respect to each upwind State's emissions. In addition, in some instances, EPA did not have quantitative information to assess certain of these factors, and instead relied on qualitative information. These considerations were secondary aspects of EPA's analysis. They include:

- The consistency of the regional reductions with the attainment needs of the downwind areas with nonattainment problems
- The overall fairness of the control regimes required of the downwind and upwind areas, including the extent of the controls required or implemented by the downwind and upwind areas
- General cost considerations, including the relative cost-effectiveness of additional downwind controls compared to upwind controls

63 FR 57376.

b. Final Action

i) General Meaning of the "Contribute Significantly"

Provision

The significant contribution test of section 126(b)/110(a)(2)(D) represents Congress's effort to determine how the various users of the downwind air basin should share that valuable resource when the air basin has, or may have, a nonattainment problem. The sharing occurs through a determination by EPA that the appropriate upwind entities are emitting pollutants in amounts that "contribute significantly" to a downwind nonattainment problem, or interfere with maintenance.

Under EPA's favored interpretation of section 110(a)(2)(D)(i) (although, as described below, not the only reasonable interpretation), the amounts of emissions that contribute significantly must be prohibited. The remaining amounts of emissions – those that do not contribute significantly – need not be controlled under section 110(a)(2)(D)(i). Under section 126(c), if EPA grants a petition on grounds that the indicated sources violate the prohibition of section 110(a)(2)(D), EPA may promulgate a remedy that has the effect of requiring the elimination of the amount of emissions that contribute significantly to nonattainment, or that interfere with maintenance, downwind.

The CAA does not define the term "contribute significantly," nor specify any of the factors that should be considered in applying the term. That is, Congress did not provide that a specified amount of contribution from upwind sources to a downwind nonattainment problem should be considered to be "significant," nor did Congress specifically direct EPA to determine that a particular amount of contribution should be considered "significant." Certainly, Congress knew well how to draft the provision to include a specific standard or a set of criteria, had Congress chosen to do so. Compare section 183(e) (requiring EPA to establish controls on the set of consumer and commercial products that EPA determines account for at least 80% of VOC emissions in areas that violate the NAAQS) and section 107(d)(4)(A)(v) (establishing criteria for EPA to consider in determining whether to grant a State's request to exclude certain portions from ozone or carbon monoxide nonattainment areas classified as serious or higher).

Nor does the statute require the downwind petitioner or EPA to demonstrate that the upwind reductions, with or without other reductions from local, national, or other regional measures, will

result in attainment and maintenance of the downwind problem. By comparison, in other provisions, Congress did require the downwind nonattainment area or EPA to specify an attainment plan and demonstration. See sections 182(c)(2)(A), 182(d)(flush language at beginning), and section 182(e) (flush language at beginning) (downwind states designated nonattainment for ozone and classified as serious, severe, or extreme, must submit attainment demonstrations on specified schedules); and section 110(c)(1) (EPA must promulgate a Federal Implementation Plan under certain circumstances).[18] Similarly, in other sections, Congress required compliance with SIP requirements before a State with a nonattainment area would be eligible for certain benefits. See section 107(d)(3)(E)(ii) and (v) (nonattainment area may be redesignated to attainment only if, among other things, SIP has been approved and State has met applicable requirements); section 181(a)(5)(A) (nonattainment area may receive an extension of attainment date if, among

[18] It is true that section 110(a)(2)(I) requires SIPs for nonattainment areas to meet the nonattainment requirements found in part D, which include requirements to submit an attainment demonstration. However, failure by a downwind State to submit an attainment demonstration would not have any direct effect on EPA's decision whether to grant the downwind State's section 126 petition.

other things, State has complied with all SIP requirements). Congress did not establish such strictures with respect to the downwind State under section 110(a)(2)(D)(i)(I).

Rather, Congress provided simply that upwind contributions must be eliminated if they are "significant". According to the dictionary, the term "significant" means, among other things, "(1) "Having or expressing a meaning; meaningful... (3) Having or likely to have a major effect; important; (4) Fairly large in amount or quantity...." American Heritage Dictionary of the English Language (3d ed. 1992) 1679. Thus, the term appears to permit of various meanings, ranging from the more general "meaningful" or "important," which would permit consideration of more factors or circumstances; to a sufficiently large air quality contribution. Under these circumstances, EPA has discretion under Chevron U.S.A., Inc. v. Natural Resources Defense Council, 468 U.S. 1227 (1984) (Chevron), to an interpretation of the statutory test of "contribute significantly" that reflects a reasonable accommodation with the purposes of the

statute.[19]

ii) Varied Circumstances of Air Pollutant Transport

It was wise for Congress to authorize discretion to EPA because defining the significant contribution test amounts to determining how the downwind air basin should be shared among upwind and downwind claimants, a task that necessarily involves making judgments as to the extent and manner in which that basin may be shared under the specific circumstances presented. Because there are many different contexts in which air pollution transport may occur, the basin may be shared differently, and the significant contribution test may be applied differently, in those contexts. For example, the types of pollutants may vary, ranging from direct pollutants such as SO2, to secondary pollutants, such as NOx. The numbers of areas (both upwind and

[19]The term "contribute significantly" or variations of that term is found in various other Clean Air Act provisions concerning various pollutants, including, among others section 169B(c)(1) (visibility impairment), section 187(c) (carbon monoxide), and section 189(e) (particulate matter). The term has been defined differently under those various sections. Indeed, in section 188(f), relating to particulate matter, the term "contribute significantly" is used twice, and EPA has concluded that it should be given a different meaning for each of the two uses. "Addendum to General Preamble for Future Proposed Rulemakings: State Implementation Plans for Serious PM-10 Nonattainment Areas, and Attainment Date Waivers for PM-10 Nonattainment Areas Generally," 59 FR 419998, 42004 (August 16, 1994).

downwind) may vary. The numbers of sources and amounts of pollutants may vary. The status of both upwind and downwind control implementation efforts, and of air quality planning efforts, may also vary.

To illustrate the practical importance of these variations:

At one extreme, a relatively simpler transport problem may arise involving a direct pollutant, such as SO2, and one upwind State with one or a few sources, and one downwind State with one or a few sources. Under these circumstances, the sharing of the air basin presents important and complex decisions, but it need occur only as among several sources. Moreover, a clear path to attainment may be determined (although choosing among several alternative control schemes to reach attainment may be necessary). This scenario is similar to some of the past EPA rulemakings. See Air Pollution Control District of Jefferson County, Kentucky v. EPA, 739 F.2d 1071 (6th Cir. 1984).

The opposite extreme is similar to the circumstances of the NOx SIP call and today's rulemaking. These actions involve the greater technical complexity of a pollution problem caused by a secondary pollutant, ozone. There are numerous

downwind areas with nonattainment problems, and numerous upwind sources in numerous upwind States. Upwind sources have varying impacts on the different downwind receptors. Downwind States are at varying stages in ozone planning efforts; some do not yet have approved attainment demonstrations. In addition, varying control levels may have already been implemented by similar sources.

These variables may profoundly affect the type of control efforts on upwind sources that may be considered to be reasonable. For example: Assume that Downwind State exceeds its NAAQS by 10 percent. The amount of pollution is determined to be created in 90 percent part by sources in Downwind State, and in 10 percent part by sources in Upwind State. In this example, were the Upwind Sources to eliminate their contribution, the Downwind State would experience attainment of the NAAQS.

If the air basin in Downwind State is viewed as the resource of solely the citizens of Downwind State, then the Upwind Sources may be obliged to eliminate 100 percent of their contribution. However, if the air basin is viewed as a resource to be shared in some manner among the citizens of Upwind and Downwind

States, then a different pattern of control obligations may emerge.

Further, different results may seem reasonable depending on existing control levels. For example, in Scenario-1, assume that Upwind State has always enjoyed attainment air quality, and Upwind Sources have never implemented any controls, but that Downwind State has long experienced nonattainment air quality, and Downwind Sources have already implemented extensive controls. Under these circumstances, at least some level of controls on Upwind Sources may seem reasonable.

On the other hand, under Scenario-2, assume, that Upwind State is itself a nonattainment area, and that Upwind Sources have already implemented extensive controls to improve air quality in Upwind State. Assume further that Downwind State has long experienced attainment air quality, Downwind Sources have never implemented any controls, and only recently, growth in Downwind State has led to sufficiently more emissions from Downwind Sources to tip air quality into nonattainment. Under these circumstances, a control level on Upwind Sources that is lesser than under Scenario-1, or even a zero control level on Upwind

Sources, may seem reasonable.

iii) Definition of the Significant Contribution Test and Legislative History

The EPA believes that Congress provided in section 126/110(a)(2)(D) the flexibility to determine the upwind control obligations under these varying circumstances. As indicated above, the term "significant[]" may be construed broadly, to mean "important" or "meaningful". The Senate Report accompanying the CAA Amendments of 1977, which added section 126, offered the following description of the purpose of the addition of section 126:

The [1970 version of the Clean Air Act] did not specify any abatement procedure in the event that a stationary source on [sic: in] one State did emit air pollutants which adversely affected the air quality control efforts of another State. As a result, no interstate enforcement actions have taken place, resulting in serious inequities among several States, where one State may have more stringent implementation plan requirements than another State. For example, an implementation plan for the State of Ohio was not even proposed until 1976. It has now been challenged and has not yet been effectively implemented. As a result,

there are no enforceable control requirements applicable to most of the significant major stationary sources of sulfur oxides in Ohio. The emissions from plants in Ohio are transported across the Ohio River to West Virginia, which must then cope with pollution not generated by a source under its own control; and must require more stringent control of West Virginia sources to attain the ambient air quality standards.

In the absence of interstate abatement procedures, those plants in States with more stringent control requirements are at a distinct economic and competitive disadvantage. This new provision is intended to equalize the positions of the States with respect to interstate pollution by making a source at least as responsible for polluting another State as it would be for polluting its own State.

S. Rep. 95-127 (95th Cong. 1st Sess.) at 41-42.

Clearly, the legislative history of section 126 indicates that this provision, which of course relies on the significant contribution test, is intended to take into account relative control requirements upwind and downwind. Congress's focus on this specific factor -- which concerns costs and equity, and not air quality -- coupled with the fact that the term "significant"

may be read broadly, has led EPA to conclude that the term should be defined broadly to take account of all the important aspects of the interstate pollution problem. In the context of ozone, EPA applies this approach through a multi-factor formula discussed below.

It should also be noted that the statutory provisions contain no constraint that would indicate that the downwind States must have developed attainment demonstrations before upwind controls may be imposed. On the contrary, section 126(c) establishes a 3-year period for implementation of controls that applies by its terms, without any reference to the timing of attainment needs downwind. This provision indicates that Congress intended section 126 controls to apply even in the absence of downwind attainment demonstrations.

iv) Application of Significant Contribution Test to Ozone Problems.

1) **Nature of the Ozone Problem**

The ozone transport problem in the part of the United States covered by the section 126 petitions that EPA is considering in today's action may be characterized as follows: There are several downwind

areas that have nonattainment air quality under the 1-hour ozone NAAQS, and numerous more that have nonattainment air quality under the 8-hour ozone NAAQS. These ozone problems are caused by the collective emissions from numerous downwind and upwind sources. As EPA stated in the NOx SIP Rule final rulemaking:

> Unhealthful levels of ozone result from emissions of NOx and VOCs from thousands of stationary sources and millions of mobile sources and consumer products and other sources across a broad geographic area. Each source's contribution is a small percentage of the overall problem; indeed, it is rare for emissions from even the largest single sources to exceed one percent of the inventory of ozone precursors even for a single metropolitan area. Under these circumstances, even complete elimination of any given source's emissions may well have no measurable impact in ameliorating the nonattainment problem. Rather, attainment requires controls on numerous sources across a broad area. Ozone is a regional scale problem that requires regional scale reductions.

63 FR 57,375-76 (quoting NOx SIP call NPR).

Further, UAM-V air quality models show that the major areas in the northeast, with respect to which

section 126 petitions have been submitted, have 1- and 8-hour nonattainment air quality problems that will continue even after all areas implement all controls specifically required under the CAA. These model runs assume that the amount of emissions will continue to grow at certain rates, and that meteorology will recur that replicates the types of weather episodes that since 1988 have been conducive to ozone transport and to a high level of exceedances of the ozone NAAQS.

Further, many States do not yet have SIPs approved as demonstrating attainment for each of the downwind areas at issue that have nonattainment problems.

In addition, the areas with one-hour ozone NAAQS problems have, by and large, implemented more controls over a longer period than have their upwind contributors. While some downwind nonattainment areas have not yet fully implemented all of their required measures, the UAM-V modeling shows that even when these measures are fully implemented, certain areas with nonattainment problems would continue to show nonattainment.

2) **Reasonable Step in Ameliorating Ozone Nonattainment**

Under the circumstances presented concerning the ozone problem, EPA believes it reasonable to interpret section 126(b)/110(a)(2)(D)(i) to authorize a step in

the direction of ameliorating the downwind nonattainment problem by achieving cost-effective reductions to eliminate an important component of the upwind contribution. Additional reductions may be necessary from, for example, sources in the downwind area itself or from national measures that EPA may promulgate. However, again, these sections do not require an overall plan for attainment prior to action to eliminate significant upwind contributions.

This interpretation treats section 126(b)/110(a)(2)(D)(i) as a control mechanism that is similar to numerous other provisions in the CAA in which Congress mandated cost-effective or technologically achievable reductions in ozone precursors from a particular group of sources for the purpose of ameliorating ozone nonattainment problems, but without any requirement for some overall attainment plan.

For example, in promulgating various mobile source rules to control ozone precursors, EPA generally examines the need for further reductions of those precursors based on the expected attainment or nonattainment status of areas nationwide. The EPA then examines whether further regulation of the mobile sources is appropriate, based on the amount of

emissions from those sources as well as the feasibility and cost-effectiveness of such regulation.[20] The resulting rules are not designed, by themselves, to lead to attainment in all areas; and in promulgating these rules, EPA does not specify any particular strategy for reductions from additional sources designed to reach attainment in all areas. As additional examples, EPA recently promulgated standards for nonroad diesel engines. EPA first noted the level of contribution from such engines to total nationwide NOx and PM emissions and stated that without further controls, the contribution from these engines would increase. EPA then developed standards based on the feasibility of controls, the amount of emission reductions (in tons of NOx, VOC and PM reduced), and the cost of the controls or control levels. Although EPA did compare the cost-effectiveness of these standards against that of other standards, EPA did not attempt to integrate these standards into any specific

[20]Different types of mobile sources are regulated based on different specific sections of the CAA, with some sections placing more emphasis on one or more of the criteria mentioned above. E.g., section 202(i)(3)(c)(Tier 2 light-duty standards based on need for further reductions, availability of technology, and cost-effectiveness); section 202(a)(3)(A) (heavy-duty on-highway standards reflect greatest reduction achievable through available technology, considering cost, energy, and safety factors).

strategy for achieving attainment based on reductions from all sources. 63 FR 56968 (Oct. 23, 1998). See 62 FR 54694 (Oct. 21, 1997) (promulgation of standards requiring emission reductions from heavy duty motor vehicles based on feasibility, taking into consideration cost-effectiveness, without specifying any particular overall strategy for overall attainment).

Similarly, under section 183(e), Congress directed EPA to determine the categories of consumer and commercial products that account for at least 80 percent of the VOC emissions from such products in areas that violate the ozone NAAQS. After doing so, EPA must proceed to regulate those categories of sources by requiring "best available controls." Again, the statute does not specify the need for any particular link to demonstrations of attainment downwind.

For these reasons, EPA disagrees with the commenters who argued that EPA should deny the section 126 petitions because a number of nonattainment areas may be brought into attainment without transport controls. Although this may be true, EPA's modeling shows areas with nonattainment problems that are not expected to be brought into attainment even with

transport controls.

The EPA also disagrees with the commenters who stated that the section 126 petitions should be denied because implementation of the NOx SIP call (and, presumably, the section 126 control program) will not by itself achieve attainment. These commenters suggested that this failure to achieve attainment indicates that upwind controls have no use for attainment purposes, and that only local controls should be implemented.

The EPA agrees that regional controls may not by themselves result in attainment in all downwind areas, but modeling shows that these controls ameliorate nonattainment problems. In addition, EPA does not believe that Congress mandated an overall demonstration of attainment as a prerequisite to requiring even initial reductions from upwind States whose emissions clearly are part of the nonattainment problem. All that is necessary is an indication that these reductions ameliorate the nonattainment problem.

3) **Factors in Weight of Evidence Test**

Further, EPA believes that the weight-of-evidence test that considers a series of factors is an appropriate means to define the significant contribution standard.

a) **Collective Contribution**

One of the principal factors that EPA examined was the collective contribution aspect of ozone formation, described above. That ozone is caused by the collective contribution of numerous sources across a broad geographic area is universally true, and thus is true for each of the downwind receptors. This factor pushes in the direction of recognizing that even relatively small (in an absolute sense) contributions must be recognized as a meaningful part of the problem and thus potentially as part of the solution.

b) **Extent of Downwind Problem**

A second principal factor that EPA recognized was the extent of the downwind problems. As noted above, for each downwind area with nonattainment air quality under either or both the 1- and 8-hour NAAQS, EPA used computer modeling to determine that certain of these nonattainment areas would continue to have nonattainment problems in the future, even assuming the implementation by all areas of specifically required CAA obligations. These circumstances indicate that additional controls will be necessary for the downwind areas to attain. This factor also pushes in the direction of recognizing that even relatively small (in

an absolute sense) upwind contributions must be recognized as a meaningful part of the problem and thus potentially as part of the solution.

***c)* General Factors**

EPA also examined some factors more generally, without applying them to each downwind (or upwind) contributor. First, EPA recognized that in general, as part of the Ozone Transport Commission (OTC), the section 126 petitioners have agreed to implement NOx controls pursuant to a Memorandum of Understanding, -- the OTC NOx MOU -- which requires controls similar to those that EPA would mandate were the section 126 petitions approved. Moreover, virtually all of the downwind areas are themselves upwind contributors, and thus would be subject to the controls placed on upwinds. As a result, sources in the section 126 petitioning States may be expected to be subjected to at least the same level of control as upwind sources targeted by those petitions. Indeed, in general, the SIPs in downwind areas with one-hour NAAQS ozone nonattainment problems have already required ozone precursor controls over a longer period of time than have the upwind areas. This factor, which is related to equity, also generally argues in favor of controls

on upwind sources. As noted above, the legislative history of the 1977 CAA Amendments notes that one of the purposes of section 126 was to ensure this type of equity.

Moreover, because downwind areas under the one-hour NAAQS are already fairly vigorously controlled, the cost-per-ton removed for additional downwind controls is generally higher than the cost-per-ton removed for upwind controls. As EPA stated in the NOx SIP call final rule–

[I]n general, areas that currently have, or that in the past have had, nonattainment problems under the 1-hour NAAQS, or that are in the Northeast Ozone Transport Region (OTR), have already incurred ozone control costs. The controls already implemented in these areas tend to be among the less expensive of available controls.... EPA has determined that, in general, the next set of controls identified as available in the downwind nonattainment areas under the 1-hour NAAQS would cost approximately $4,300 per ton removed. By comparison, EPA has determined that the cost of the regional reductions required [in the NOx SIP Call final rule] would approximate $1,500 per ton removed. Thus, it appears that the upwind reductions required by [the

NOx SIP Call final rule] are more cost-effective per ton removed than reductions in the downwind nonattainment areas.

63 FR 57,379. This factor of relative cost-effectiveness points towards controls on even relatively small (in absolute terms) upwind contributions.

d) **Air Quality Metrics**

The factors described above informed EPA's judgment about the size of upwind contributions that should be considered to be a meaningful part of downwind attainment problems. EPA employed two air quality models -- UAM-V and CAMx -- which each generated a set of modeling runs to measure the amount of contribution generated by the upwind State's entire inventory of ozone precursors to the downwind area's nonattainment problem. Commenters have questioned EPA's evaluation of the impact of the full amount of the statewide inventory, as opposed to evaluating the impact of only the amount of emissions required to be reduced by the rulemaking. EPA believes it appropriate to evaluate the impact of the entire inventory because this amount causes the upwind State's contribution to ambient ozone levels downwind.

The EPA evaluated this impact on the basis of a set of metrics for the UAM-V modeling runs, and a separate set of metrics for the CAMx modeling runs. The EPA determined that, in light of the collective contribution nature of the ozone problem and the extent of the downwind ozone nonattainment problems, even relatively small (in absolute terms) upwind contributions to those nonattainment problems should be considered to be meaningful components of the problems and thus as potentially subject to controls. Only if the statewide contribution was extremely small did EPA conclude that none of the emissions from the State's sources could be considered to contribute significantly to the downwind nonattainment problems. The EPA's specific evaluation of these metrics, including its response to comments received, is discussed below.

e) **Cost-effectiveness Factor**

After determining which upwind State emissions should be considered part of the downwind nonattainment problem, EPA considered whether the portion of those emissions from section 126 sources could be reduced in a highly cost-effective manner. EPA determined the amounts that could be so reduced to be the amounts that significantly contribute to downwind nonattainment, and

that therefore must be prohibited.[21] In theory, if all of the upwind State's emissions came from section 126 sources and could be eliminated through highly cost-effective controls, EPA would conclude that all of those emissions should be considered to contribute significantly to nonattainment downwind, and EPA would require their elimination. On the other hand, in theory, if EPA determined that no highly cost-effective controls were available, EPA would determine that none of the emissions contribute significantly, and therefore than none need be eliminated.

The EPA received comments that it does not have authority to use cost as a factor, or that if EPA could consider cost, EPA did not formulate its consideration of cost in a rational manner. These comments are discussed below. The EPA also received comment that it should not apply a uniform level of control to all affected upwind sources. These comments are also discussed below.

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[21]Strictly speaking, only the amount of emissions that may be eliminated through highly cost-effective controls should be considered the amount that contributes significantly to downwind nonattainment. For convenience, throughout the notices and supporting documents for today's action, as well as the notices and supporting documents for the NOx SIP call final rulemaking, EPA occasionally refers to the entire amount of emissions from the upwind State as contributing significantly to nonattainment downwind.

***f)* Air Quality Modeling of Amount of Reductions**

Finally, as a general consideration, EPA modeled the upwind reductions and determined that they generally were consistent with the attainment needs of the downwind areas with nonattainment problems. That is, the reductions from affected sources in each upwind State, combined with reductions from affected sources in the other upwind States, resulted in meaningful ambient improvement downwind, and did not result in any situation in which upwind sources were required to reduce more than necessary to achieve attainment in each of the downwind areas that they impact. This consideration further supports EPA's determination as to significant contribution.

c) Comments and EPA Responses

i) Vagueness

Some commenters considered the significant-contribution test as EPA defined it in the NPR to be vague or unclear.

Other commenters did not appear to consider the test to be vague, and EPA believes that its discussion of the test in the NOx SIP Call rulemaking (referenced in the section 126 NPR) adequately explained the Agency's interpretation and methodology. In any event,

EPA believes that the description above of the multifactor test further elaborates on the connection of each of the primary and secondary factors to the conclusions drawn.

ii) Collective Contribution

In the NPR, EPA incorporated the determination in the NOx SIP call that whether the upwind sources' contribution to nonattainment downwind rises to the level of significance is determined, in part, by reference to the ambient impact of all of the ozone precursor emissions in the upwind sources' state, as indicated by the state-by-state UAM-V and CAMx modeling runs. In addition, EPA evaluated the impact of the reductions in emissions by modeling the impact of all upwind reductions on downwind receptors.

1) **Comments**

Commenters argued that EPA erred in considering collective contribution as a factor in the determination of significant contribution. According to the commenters, EPA employs the collective contribution approach to evaluate the downwind air quality impact of emissions from sources in each upwind State by considering those emissions to be part of the entire set of multi-upwind-state emissions. According

to the commenters, EPA then determines that because the entire set of multi-upwind-state emissions collectively contributes significantly to nonattainment downwind, each upwind State's emissions, and emissions from all the targeted sources in each upwind State, should be considered to contribute significantly to nonattainment downwind. According to the commenters, sections 126(b) and 110(a)(2)(D)(i) should be read to require evaluation of the downwind air quality impact of emissions from only the particular sources targeted by the section 126 petitions, or at most from each upwind State on a State-by-state basis, and not on any geographically larger basis. Some commenters stated that the terms of section 126(b), which limit EPA's possible finding to "any major source or group of sources," requires EPA to make the determination of significant contribution on the basis of each source or group of sources targeted by the section 126 petitions, and not on a state-wide basis.

Commenters further stated that reliance on broader modeling results based on collective contribution failed to evidence the precise contribution from the targeted upwind sources or their individual states, and allowed EPA to claim that the small contributions from the targeted sources were in fact larger because they

were linked to contributions from other sources. The commenters further expressed concern that the collective contribution approach proves too much because it could be used to combine any particular set of emissions with a much larger set of emissions that have a large impact downwind, and thereby support the claim that the initial set of emissions is partly responsible for that large impact downwind. Similarly, EPA received comments that it should evaluate the petitions on a petition-by-petition basis.

2) **Responses**

a**)** **Petition-by-Petition**

The EPA agrees that with respect to each section 126 petition, EPA must make a determination as to whether the sources identified in that petition contribute significantly to nonattainment in the petitioning state. EPA believes that it may rely on the collective contribution factor to inform its judgment as to the level of contribution that it may consider to be significant. That is, as explained above, even relatively small amounts of contribution (in an absolute sense) may be considered to be significant in light of the collective contribution of many sources of the ozone problem.

b) Statewide Groups of Sources

Further, section 126 authorizes EPA to grant a petition with respect to either "any major source" or "group of stationary sources." The EPA believes it is reasonable to treat all section 126 sources in a single upwind State as a "group[] of sources,"[22] rather than to treat sources individually or to treat smaller sets of sources as a "group". As noted elsewhere, ozone results from emissions of numerous sources over a broad geographic area; in many cases, even the largest source comprises less than 1% of the inventory. Accordingly, attempting to quantify the impact of individual sources, or even small groups, may prove futile.

EPA believes it is reasonable to confine its analysis of the section 126 sources to a state-by-state basis, so that the impact of emissions from sources in one upwind State is analyzed separately from the impact of emissions from sources in another upwind State (except, as described below, for analyzing the impact of the reductions from the section 126 controls). That is, EPA did not combine emissions from more than one upwind State in its UAM-V zero-out or CAMx

[22]The term "group of sources" is not defined, and does not exclude other reasonable methods of combining sources, such as combining all targeted sources in a particular geographic region.

apportionment modeling. EPA agrees that it is sensible to demarcate sets of upwind emissions along some lines, and evaluate those sets separately.

The EPA believes that in the context of section 126 action, demarcating sources by state lines is reasonable. Although emissions and the ozone they generate of course do not respect state boundaries, those boundaries are important for regulatory purposes.[23] As discussed elsewhere in today's rulemaking, under EPA's interpretation of section 126, sources subject to that provision may not emit in excess of the amounts that would be authorized under SIP provisions that meet the requirements of section 110(a)(2)(D)(i)(I). In the case of ozone precursors, the section 110(a)(2)(D)(i)(I) requirements are applied on the basis of state-wide emissions. If State-wide emissions contribute significantly to nonattainment downwind, then the State's section 126 sources may be subject to SIP controls; if state-wide emissions do not contribute significantly, then the State's section 126 sources would not be subject to SIP controls. For these reasons, it is appropriate to evaluate the impact

[23] In general, under the CAA, States are given the primary responsibility for air pollution prevention and control. Section 101(a)(3).

of State-wide emissions from all source categories in order to determine whether the emissions from the section 126 sources should be considered to contribute significantly.

By the same token, if EPA finds that emissions from a State's section 126 sources contribute significantly to nonattainment downwind because State-wide emissions contribute significantly, the State may promulgate SIP controls that would achieve sufficient emissions reductions so that EPA may conclude that the section 126 sources in that State should no longer be considered to contribute significantly to nonattainment. The State may place these SIP controls on any sources it chooses, and is not limited to imposing controls on the section 126 sources. Under these circumstances, as discussed elsewhere in today's rulemaking, EPA may rescind the section 126 finding. This determination – that in light of the SIP controls, the section 126 sources no longer contribute significantly – is possible if the initial finding that the section 126 sources do contribute significantly was made in the context of examining the emissions from the upwind State itself.

This analysis leads EPA to conclude that in determining whether the sources targeted in each

petition make a significant contribution to the petitioning state, EPA may rely on the results of the State-by-State UAM-V zero-out modeling and the state-by-state CAM-X modeling as the primary basis for that determination. These models allow a determination that state-wide emissions do or do not contribute significantly to nonattainment downwind, and therefore – under EPA's interpretation of section 126, as described immediately above -- whether the emissions from the section 126 sources contribute significantly to nonattainment.

The EPA also believes that the collective contribution aspect of ozone formation provides a separate basis for relying on the determination of whether State-wide emissions contribute significantly as the basis for the determination that emissions from section 126 sources contribute significantly. That is, because an ozone nonattainment results from the emissions of numerous sources across a broad geographic area, and because the State-wide emissions from a particular upwind State contribute significantly to that problem, then the various emitters within the upwind State should be considered to contribute significantly to that problem.

Both of the above bases for relying on State-wide

emissions impacts to determine whether section 126 source emissions contribute significantly -- EPA's interpretation of the relationship of section 126(b) to section 110(a)(2)(D)(i), and the collective contribution aspect of ozone formation -- are consistent with certain facts concerning the NOx emissions inventories for the upwind States associated with ozone transport problems. Specifically, as discussed below, for each upwind State subject to today's rulemaking, the section 126 sources are a substantial portion of the State-wide NOx inventory. Thus, it is more readily apparently, that because the entire upwind State emissions contribute significantly, the portion of those emissions from the section 126 sources contribute significantly.

The EPA is well aware that the metrics for determining the air quality component of the significant contribution test are based on the entire set of emissions from the upwind State, not only the emissions from the section 126 sources. It is conceivable that modeling only the emissions from the section 126 sources would result in smaller ambient impacts downwind, and that those smaller impacts, if analyzed on the basis of the metrics and thresholds developed for State-wide emissions, may not exceed

those thresholds.

The EPA believes it sensible to link its determinations to the state-by-state modeling of emissions of all ozone precursors in each state. For certain upwind States, this modeling indicates that all ozone precursors in the State contribute significantly to nonattainment downwind. A group of sources that represents a substantial portion of those emissions should be considered to contribute significantly to nonattainment downwind as well. Otherwise, the determination that all of a State's emissions contribute significantly could in effect be defeated by the simple expedient of dividing those emissions among various source categories, and determining that the emissions from each source category are too few to constitute a significant contribution.[24]

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[24] EPA acknowledges that it is theoretically possible for there to be two adjoining upwind States, one of which has a NOx inventory that contributes significantly downwind, but that has only a few emissions from section 126 sources; and the second of which has a NOx inventory that does not contribute significantly downwind, but that has a large percentage of emission from section 126 sources. These theoretical circumstances could lead to the anomaly that the relatively few emissions from section 126 sources in State-1 may be subject to section 126 controls, but the greater emissions from section 126 sources in State-2 may not be subject to section 126 controls. These factual circumstances are not present in this or related rulemakings. All the States for which actions are being taken contain both substantial amounts of emissions from utilities and from other sources. No upwind States contain

Additional data sets support EPA's technical determination that emissions from the section 126 sources contribute significantly downwind. For the NOx SIP call rulemaking, EPA conducted air quality modeling runs indicating the impact of emissions reductions, comparable to those required today, in certain of the upwind States. These model runs indicate that ambient ozone reductions occur in northeastern nonattainment areas as a result of these reductions. It should be noted that some of the section 126 petitioning States do not target sources in all of the upwind States that EPA determined during the NOx SIP call rulemaking to contribute significantly to those States. Even so, EPA believes that the sources targeted by the section 126 petitions overlap sufficiently with this NOx SIP call modeling so that the conclusions of this modeling – that upwind NOx reductions improve ambient ozone concentrations downwind – apply as well in today's action. This modeling is described in Air Quality Modeling Technical Support Document for the NOx SIP Call, Docket A-96-56, No. VI-B-11, p. 70.

In addition, the U-runs performed by EPA, described below, confirm that the amount of emissions

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an exceptionally high percentage of emissions from section 126 sources, but do not contribute significantly.

reductions from each upwind State's section 126 sources has a meaningful downwind impact. Although EPA did not complete these U-runs on a state-by-state basis, the results indicate an impact from each upwind State's sources. In some cases, these impacts are small in an absolute sense, a result that is to be expected when the amount of emissions reductions from sources in a particular upwind State required through the highly cost effective controls is relatively small, and when those sources are distant from the downwind receptors.

However, the reduction in downwind ozone levels is meaningful, and thus supports the affirmative technical determination made today concerning the section 126 sources in that upwind State, because ozone nonattainment problems are caused by emissions from numerous sources over a broad geographic area, and those problems must be solved by achieving emissions reductions from numerous sources over a broad geographic area. Both the U-runs and the modeling described immediately above that EPA conducted for the NOx SIP call indicate that the ambient impact of the emissions reductions from sources in a particular upwind State are more discernible when they are combined with comparable reductions from sources in other upwind States.

iii) Bright Line

Commenters argued that EPA should have established a bright line test based on air quality impact alone. Under this view, EPA would determine that a specified frequency and/or magnitude of ambient ozone impact would constitute a significant contribution, so that amounts of NOx emissions that cause an impact higher than the specified amount would have to be reduced to the point where the remaining emissions caused an impact less than the specified amount. Proponents of this approach have pointed out that EPA's approach results in a situation in which Upwind State-1 that is near to a downwind nonattainment area may continue to contribute a substantially higher amount of ozone to the downwind area even after it implements the highly cost effective controls than Upwind State-2 that is further away from the nonattainment area contributes even before Upwind State-2 implements any controls.

The EPA rejected the bright-line approach because EPA considers it reasonable, in the context of the ozone nonattainment problems under both the 1- and 8-hour NAAQS, to interpret the significant contribution standard as mandating the elimination of the portion of NOx emissions from sources in states upwind of the nonattainment problems that may be eliminated through

highly cost-effective controls, when those emissions cause even a relatively small (in an absolute sense) ozone impact. Interpreted and applied in this manner, section 126(b)/110(a)(2)(D) authorize a useful step towards ameliorating ozone nonattainment problems. As discussed above, in many other instances, Congress has directly mandated, or has authorized EPA to require, a cost- or technology-based control scheme designed to reduce ozone precursors for the purpose of ameliorating nonattainment problems.

The EPA recognizes that this interpretation and application of the significant contribution test diminishes the importance of the fact that ozone precursors have a greater impact the closer they are emitted to the nonattainment problem. However, all of the sources subject to the affirmative technical findings contribute to the nonattainment burdens in an amount that, considering the collective contribution nature of the ozone problem, must be viewed as meaningful. Moreover, nothing in sections 126/110(a)(2)(D) indicate that Congress intended that sources in upwind States closer to a nonattainment problem bear a proportionately larger burden of emissions reduction. Compare By section 211(c)(4)(C) (EPA may approve state fuel controls, and thereby waive

Federal preemption of such rules, only after finding that “no other measures that would bring about timely attainment exist, or if other measures exist and are technically possible to implement, but are unreasonable or impracticable;” this provision indicates Congress knew how to require that control schemes be prioritized).

iv. Other Factors

In addition, some commenters stated that it was unlawful to include certain factors in the significant contribution test, including the secondary factors concerning (1) the overall fairness of the control regimes required of the downwind and upwind areas (including the extent of the controls required or implemented by the downwind and upwind areas), and (2) general cost considerations, including the relative cost-effectiveness of additional downwind controls compared to upwind controls.

The commenters argued that these factors are invalid because section 110 does not by its terms authorize consideration of cost and economic fairness. They further argued that EPA has overlooked the fact that some States in the South and Midwest have already incurred significant control costs and have attained compliance with the 1-hour NAAQS.

As discussed below, EPA believes that the significant contribution test does permit consideration of cost factors. Indeed, the Senate Report explaining passage of section 126 in the CAA Amendments of 1977 made clear that one purpose of the provision was to enable downwind sources that were subject to controls because located in nonattainment areas to assure that their upwind competitors that contributed to the nonattainment problem would not reap the competitive advantages of lighter control burdens. S. Rep. 95-127 (95th Cong. 1st Sess.) at 41-42.

Further, evidence available to EPA indicates that in general, sources in the one-hour nonattainment areas have incurred greater control obligations than sources in the upwind areas.

2. Cost Factor

Summary: In the NPR, EPA proposed to follow the interpretation of the significant contribution test set forth in the SIP Call Final Rule. In particular, EPA proposed to use the cost of available controls in upwind areas as a factor in the significant contribution test.

In today's action, EPA has concluded that the proposed determination of significant contribution is appropriate. Thus, after determining the degree to

which NOx emissions from named source categories contribute to downwind nonattainment or maintenance problems in the petitioning States, the Agency determined whether any amounts of the NOx emissions from those source categories may be eliminated through controls that are highly cost effective on a cost-per-ton basis. EPA has concluded that the amount of NOx emissions from named source categories that can be eliminated through application of highly cost-effective control measures contributes significantly to nonattainment or maintenance problems downwind for purposes of sections 110(a)(2)(D) and 126.

The EPA received many comments critical of the use of the availability of cost-effective control measures in any way in the test for determining significant contribution. These comments generally fell into two categories. Commenters in the first category typically asserted that the existence of a "significant contribution" to nonattainment should be based merely on the quantitative amount of ozone transported from sources in one State to another and that cost should be irrelevant to the inquiry. These commenters argued that a significant contribution should not be any less significant simply because it is uneconomic to control, and that an insignificant contribution should not

become significant simply because it is economical to control. Rather than an element of the significant contribution analysis, the commenters suggested that the cost of controls should only be relevant for purposes of selecting controls once the Agency found that the amount of contribution in fact met some bright line quantitative measurement for significance.

By comparison, commenters in the second category argued that EPA should not utilize the cost of controls as an element of the significant contribution determination because it would unduly limit relief from ozone transport from upwind sources. These commenters suggested that by linking the determination of significant contribution to the availability of highly cost-effective controls, upwind sources could continue to emit NOx that has an adverse transport impact simply because of the cost of emissions control, whereas the finding of significant contribution should be based simply on the actual amount of ozone transport in the downwind State without regard to the cost of controls upwind.

Response: EPA disagrees with the commenters' assertions that the relative cost of controls has no place in the determination of significant contribution. EPA believes that cost of controls in general, and the

consideration of the availability of highly cost-effective controls in particular, is an appropriate factor for consideration in making the determination of significant contribution. The EPA notes that the term "significant contribution" is not defined in the statute and that neither the statute nor the legislative history provides meaningful guidance for interpreting the term. As explained elsewhere in this document, EPA contends that Congress modified the Act in the 1990 Amendments to incorporate the concept of significant contribution as applied by the Agency and the courts to provide a de minimis exception for pollutant transport across State boundaries. EPA had formerly interpreted section 110(a)(2)(E) of the 1977 Act to include this concept because otherwise the Agency arguably had to reject SIPs that allowed for any amount of cross-boundary transport, no matter how minute. See, e.g., Connecticut v. EPA, 696 F.2d at 164.

In prior determinations of significant contribution, whether in the context of section 126 petitions or in partial SIP revisions, EPA has generally utilized a multi-factor test to assess the presence or absence of a significant contribution to nonattainment. See, e.g., Proposed Determination Under

Section 126 of the Clean Air Act (Interstate Pollution Abatement), 49 FR 34851, 34859 (September 4, 1984). The determinations included consideration of a variety of factors addressing issues similar to the issues addressed by the factors in the significant contribution test utilized by EPA for today's Section 126 determinations. EPA has previously included the relative cost of controls as one consideration in the determination of the existence of a significant contribution. Id., (including as a factor "the relative costs of pollution abatement between source that contribute to a violation"). EPA has made these determinations on a case by case basis and has stated that the enumerated factors are not exclusive. See Final Determination Under Section 126 of the Clean Air Act (Interstate Pollution Abatement), 49 FR 48152 , _____ (December 10, 1984) ("EPA enumerated a nonexhaustive list of factors which the Administrator may take into account in determining whether a contribution is significant") . Given the lack of a statutory definition of what emissions "contribute significantly to nonattainment," EPA believes that it has discretion to decide what factors would best accomplish the statutory goal of eliminating upwind emissions that comprise a significant contribution to

downwind nonattainment.

Through modeling, EPA has determined that the sources covered by this section 126 action significantly contribute to downwind ambient concentrations of ozone in one or more petitioning States. Because of the pervasive problem of ozone transport across a large geographic area, many upwind sources covered by today's action may be the source of ozone for several downwind States. It does not necessarily follow, however, that EPA should force the sources to halt all emissions activities to eliminate the contribution to downwind States. EPA believes that a definition of significant contribution that required the elimination of all emissions that contribute to downwind nonattainment is not a practical or appropriate method to address the complex overlapping transport problems posed by ozone. Therefore, EPA must utilize a workable method to determine when a contribution is significant for purposes of section 110(a)(2)(D).

EPA has concluded that it is appropriate to utilize a multi-factor approach to assess whether there is a significant contribution and to take into account the availability of highly cost effective control measures to the named sources as one factor in that

analysis. EPA believes that whether some amount of emissions is significant depends, in part, upon the availability of highly cost-effective controls.

In 1990 Congress amended section 110(a)(2)(D) to make clear that contribution must be "significant", i.e., not de minimis, while remaining silent on the criteria EPA should use to make a determination of significant contribution. Especially in light of EPA's past practice of using a multi-factor approach -- including cost -- to assess contribution, Congress' action affirms that EPA retains discretion under the CAA to consider factors other than air quality when making a determination of significant contribution.

The EPA's approach is consistent with case law concerning the CAA, as well as other statutes. See Warren Corp. v. EPA, 159 F.3d 616, ___ (D.C. Cir. 1998), amended on other grounds, 164 F.3d 676 (1999) (deferring to EPA's interpretation that CAA section 211(k)(8) allows EPA to consider economic factors as well as air quality in promulgating gasoline anti-dumping provisions), citing NRDC v. EPA, 824 F.2d 1146, 1157 (D.C. Cir. 1987) (en banc) (interpreting CAA section 112 and rejecting the view that "as a matter of statutory interpretation, cost and technological feasibility may never be considered under the Clean Air

Act unless Congress expressly so provides"); International Brotherhood of Teamsters v. United States, 735 F.2d 1525, 1529 (D.C.Cir. 1984) ("In the absence of clear congressional direction to the contrary, we will not deprive the agency of the power to fine-tune its regulations to accommodate worthy nonsafety interests" under a statute focused on safety); Grand Canyon Air Tour Coalition v. FAA, 154 F.3d 455, 475 (D.C.Cir. 1998) (FAA properly considered effects of rule on air tourism industry where statute did not forbid such consideration and required not total but only "substantial restoration of the natural quiet."). When Congress intends to exclude consideration of all issues other than air quality concerns, it has used decidedly different statutory language than appears in sections 126 and 110(a)(2)(D). See Lead Indus. Ass'n v. EPA, 647 F.2d 1130, 1148-50 (D.C.Cir. 1980) (Congress' directive to promulgate primary national ambient air quality standards which "allow [] an adequate margin of safety . . . to protect the public health" precluded consideration of cost and technology factors). Where, as here, the statute is silent regarding the factors EPA may or may not consider, it is generally permissible for the Agency to consider other relevant factors or policy objectives in

carrying out the statutory goal, absent some indication to the contrary in the statutory text, structure or history. NRDC v. EPA, 824 F.2d at 1157, 1158; see also International Brotherhood, 735 F.2d at 1528-29.

Some commenters point to a Supreme Court case, Union Electric v. EPA, 427 U.S. 246 (1976) for the proposition that EPA may not include costs considerations in the interpretation of "significant contribution." In Union Electric, the Supreme Court found that the 1970 version of section 110(a)(2) did not allow EPA to disapprove an attainment sulfur dioxide (SO2) SIP on the ground that the SIP's control measures for complying with the SO2 NAAQS would be so stringent as to be technologically or economically infeasible. Id. at 265. The Supreme Court made it clear that Congress left States free to choose technology forcing measures to achieve attainment within what was then a three-year deadline. Id. at 268-69. This holding is simply inapposite to EPA's interpretation of "significant contribution." With respect to the separate question, whether EPA can take cost into account in interpreting the minimum that State SIPs are required to include, the Supreme Court expressly states that "the Administrator may consider whether it is economically or technologically possible

for the state plan to require more rapid progress than it does." Id. at 264, fn. 13. This language from the case supports EPA's interpretation of "significant contribution" rather than the views of commenters.

Finally, EPA notes that the 1977 legislative history of the CAA demonstrates that Congress was clearly concerned about the relative cost of pollution control in upwind and downwind states when it added section 126 to the CAA. The Senate Report accompanying the Clean Air Act Amendments of 1977, which added section 126, offered the following description of the purpose of the new section's addition:

> In the absence of interstate abatement procedures those plants in States with more stringent control requirements are at a distinct economic and competitive disadvantage. This new provision is intended to equalize the positions of the States with respect to interstate pollution by making a source at least as responsible for polluting another State as it would be for polluting its own State.

S. Rep. 95-127 (95th Cong. 1st Sess.) at 41-42. This

legislative history evinces Congressional concern about economic equity and supports EPA's consideration of cost-effectiveness as a factor in determining significant contribution.

C. EPA's Interpretation of Section 126: 8-Hour NAAQS Summary

In the NPR, EPA proposed to make a finding that certain sources and categories of sources identified in the §126 petitions significantly contribute to attainment in, or interfere with maintenance by, one or more of the petitioning States. EPA proposed to make this finding based upon evidence that upwind sources contribute significantly to violations of the ozone NAAQS under both the pre-existing 1-hour standard and the new 8-hour standard which EPA recently promulgated. EPA's proposed approach was consistent with that of the NOx SIP Call in which the Agency concluded that 22 States and the District of Columbia must submit State Implementation Plan ("SIP") revisions to prohibit specified amounts of NOx emissions in order to reduce NOx and ozone transport across State boundaries in the eastern half of the United States. See, "Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone;

Rule," 63 FR 57,356 (Oct. 27, 1998). In the latter action, EPA extensively discussed the Agency's authority and rationale for finding that violations of the 8-hour ozone standard are appropriate for consideration in the assessment of interstate transport of ozone in violation of CAA §110(a)(2)(D). Id., 63 FR at 57,370-74. In the NPR for today's action, EPA also proposed to make the finding of significant contribution for purposes of §126 based, in part, upon violation of the 8-hour standard in full recognition that the Agency has not yet formally designated any areas as nonattainment under the 8-hour standard.

EPA received numerous comments on this issue, either directly or through cross references to earlier comments on the NOx SIP Call. Those commenters critical of EPA's use of the 8-hour standard raised four specific arguments: (i) that EPA cannot base the finding of significant contribution on violations under the 8-hour standard before the Agency has designated any areas as nonattainment under such standard; (ii) that EPA cannot use modeling to establish nonattainment of the 8-hour standard as a basis for the finding of significant contribution; (iii) that EPA cannot base the finding of significant contribution on the 8-hour standard now and must wait until after completion of

SIPs to implement that standard under CAA §172; and (iv) that EPA's reliance upon violations of the 8-hour standard for purposes of the NOx Sip Call or this finding under section 126 is inconsistent with President Clinton's stated implementation plan for that standard.

Response: Although EPA has previously replied to these comments in connection with the NOx SIP Call as noted above, it wishes to reiterate and expand upon those responses here.

(a) Use of the 8-hour standard before designation of nonattainment areas for that standard. The commenters noted that EPA will not formally designate nonattainment areas for the 8-hour ozone standard until the year 2000. The commenters argued that until such formal designation, EPA cannot make any determination concerning significant contribution of a pollutant from a State to any such future nonattainment area in another State. According to the commenters, until EPA designates areas for nonattainment under the 8-hour standard, the Agency has no authority either to require SIP submissions under §110(a)(1) or to make findings of significant contribution under §126 with respect to the 8-hour standard. The heart of the commenters' argument is that §110 may empower EPA to

rectify interstate pollutant transport, but that EPA must read the term “area” into §110(a)(2)(D)(i)(I) so that EPA has no authority to do so absent formally designated nonattainment areas. As further evidence of their position, the commenters alleged that the new source review requirements and other ozone nonattainment provisions of the 1990 CAA apply only to areas designated as nonattainment.

EPA disagrees that it must have designated 8-hour standard nonattainment areas prior to taking today’s action under §126(b). First, §110(a)(2)(D)(i)(I) provides, inter alia, that a SIP must prohibit emissions that “contribute significantly to nonattainment in ... any other State.” The provision does not, by its terms, indicate that this downwind “nonattainment” must already be formally designated under §107 as a nonattainment “area.” Because the provision does not include the term “area” in conjunction with the term “nonattainment,” EPA believes that the express terms of the statute do not support the claim of the commenters. Similarly, §126 as a whole also makes no reference to nonattainment “areas” and instead pointedly refers only to air pollution which can contribute to violation of the relevant NAAQS. In §126(a)(1)(B), the provision states, inter

alia, that States must provide notice of new or modified sources "which may significantly contribute to levels of air pollution in excess of the [NAAQS] in any air quality control region outside of the State" (emphasis added). Likewise, §126(c) contains no restrictions upon violations or remedies based upon the existence of nonattainment areas. Most importantly for today's action, §126(b) provides that any State may petition EPA for a finding that sources in another State are making a significant contribution, but does not tie that finding to the existence of a formally designated "nonattainment area" in the petitioning State.

EPA contends that it would be unreasonable to read into §126 a requirement that States must wait until formal designation of nonattainment areas before they may petition the Agency for relief or before the EPA may take action to alleviate transport. Such an approach would permit upwind States to inundate downwind States with emissions for extended periods of time before downwind States could seek relief. Given that §126(a) clearly contemplates advance notice of construction or modification of sources before they begin to contribute to downwind levels of air pollution, regardless of whether the downwind area is

designated nonattainment or not, EPA believes that Congress did not intend to preclude States from seeking recourse through §126(b) prior to official designation of nonattainment status. As explained elsewhere, EPA contends that the statutory reference in §126(b) should read "§110(a)(2)(D)(i)," thereby establishing that Congress intended that States have the right to petition for a finding that sources in a State contribute significantly to nonattainment in, or interfere with maintenance by, another State.

By contrast, EPA notes that other provisions of the CAA do explicitly employ the term "area" in conjunction with the term "nonattainment," and that these provisions clearly refer to areas designated as nonattainment. See, e.g., §§107(d)(1)(A)(i), 181(b)(2)(A), 211(k)(10)(D). Similarly, the provisions to which the commenters appeared to refer, §172(b) and §172(c)(5)(new source review) and §181(a)(1) and §182 (classified ozone nonattainment area requirements), by their terms apply to a designated nonattainment "area." EPA finds it unremarkable that provisions which explicitly impose requirements on nonattainment areas apply to nonattainment "areas." Rather than supporting the commenters' claim, EPA believes that the difference between the explicit wording of the provisions

illustrates the distinction Congress intended in the statute. The sections at issue, §110(a)(2)(D) and §126, do not make reference to nonattainment "areas," but rather to "nonattainment" or to levels of air pollution in excess of the NAAQS.

As further evidence of the distinction in the provisions, EPA notes that §176A(a) authorizes EPA to establish a transport region whenever "the Administrator has reason to believe that the interstate transport of air pollutants from one or more States contributes significantly to a violation of a [NAAQS] in one or more other States." This reference to "a violation of a [NAAQS]" makes clear that EPA is authorized to form a transport region when an upwind State contributes significantly to downwind area with nonattainment air quality, regardless of whether the downwind area is designated nonattainment. EPA also notes that the remedy under §176A is a SIP call under §110(a)(2)(D), thereby shedding light on the meaning of §110(a)(2)(D) and confirming that the Agency may use that provision as a tool to alleviate interstate transport. The EPA believes that §110(a)(2)(D) and §126 should be read the same way because of the parallels between those provisions and §176A(a). All of the provisions address transport and all are

triggered when emissions from an upwind area "contribute significantly" to air pollutants downwind. EPA believes that it is appropriate in light of these related provisions to apply a consistent approach to interpreting and implementing the provisions. Thus, EPA contends that the term "nonattainment" in §110(a)(2)(D) is synonymous with "a violation of the [NAAQS]" in §176A. Section 126(b), in EPA's opinion, refers to §110(a)(2)(D)(i), thereby incorporating that standard by reference. None of the three provisions at issue here make reference to nonattainment "areas," and EPA believes that this common fact is significant.

EPA also notes that the CAA contains other provisions that refer to the actual air quality status of a particular area rather than to the area's formally designated status. These provisions include: (i) §§172(c) and 171(1), the reasonable further progress requirements which require nonattainment SIPs to provide for "such annual incremental reductions in emissions ... as ... may ... be required ... for the purpose of ensuring attainment of the [NAAQS]; and (ii) §182(c)(2), the attainment demonstration requirement, which mandates a "demonstration that the [SIP] ...will provide for attainment of the [NAAQS]." These provisions refer to air quality status rather than to

the designated status of the area in question. In a series of notices in the Federal Register, EPA has relied on these references to air quality status, rather than designated status, in determining that areas seeking to redesignate from nonattainment to attainment did not need to complete Rate Of Progress SIPs or attainment demonstrations, even though those requirements generally apply to areas designated as nonattainment. EPA took these actions because the air quality for those areas seeking redesignation was, in fact, in attainment notwithstanding their formal designation as nonattainment areas. See "State Implementation Plans: General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990; Proposed Rule," 57 FR 13,498, 13,564 (April 16, 1992); "Determination of Attainment of Ozone Standard for Salt Lake and Davis Counties, Utah, and Determination Regarding Applicability of Certain Reasonable Further Progress and Attainment Demonstration Requirements; Direct Final Rule,: 60 FR 30,189, 30,190 (June 8, 1995); and "Determination of Attainment of Ozone Standard for Salt Lake and Davis Counties, Utah, and Determination Regarding Applicability of Certain Reasonable Further Progress and Attainment Demonstration Requirements; Final Rule,"

60 FR 36,723, 36,724 (July 18, 1995). The EPA's interpretation was upheld by the Court of Appeals for the 10th Circuit in Sierra Club v. EPA, 99 F.3d 1551, 1557 (10th Cir. 1996).

EPA has concluded that it may take today's action before formal designation of nonattainment areas under the 8-hour standard. EPA believes that it is clear that the reference in §110(a)(2)(D)(i)(I) to "nonattainment" refers to actual air quality, not the formal designation status of an area. EPA believes that it is also clear that §126(b) is tied to actual air quality rather than to designation status. The explicit terms of §110(a)(2) and §126 do not refer to nonattainment "areas." Such a reading would not be reasonable in light of the purpose of the provisions to halt emissions of pollutants which significantly contribute to nonattainment or maintenance of attainment in other States. Accordingly, EPA believes that this issue is controlled by the clear terms of the statute and is resolvable under the first step of Chevron. If, however, the provisions were ambiguous on this point, then EPA believes that, under the second step in the Chevron analysis, a court should give EPA deference for its reasonable interpretation. EPA contends that interpreting "nonattainment" to refer to

air quality is reasonable for the reasons described above. Additional arguments based upon the structure of the Act are detailed in EPA's action on the NOx SIP Call. See, 63 FR 57,356, 57,372 .

(b) Use of modeling to support a finding of significant contribution to nonattainment of the 8-hour standard. The commenters also argued that EPA cannot use "modeled nonattainment areas" for purposes of §126 to determine whether the emissions of sources in one State contribute significantly to nonattainment of the 8-hour ozone standard in another State. By the commenters' reasoning, EPA must first define such nonattainment areas in accordance with the applicable regulations for determining violations of the ozone standard. Thus, the commenters argued that EPA can only make the determination of significant contribution to nonattainment of the 8-hour standard in accordance with monitoring requirements of 40 C.F.R. §50.10. In particular, the commenters objected to EPA using modeled nonattainment areas in advance of developing a procedure for States to perform attainment demonstration modeling for the new 8-hour standard.

EPA disagrees with the commenters on the appropriateness of using modeling to establish nonattainment. First, EPA disagrees that it may not

generally use modeling to assess the likelihood of a future significant contribution to nonattainment or interference with maintenance as contemplated by §126. The provision does not direct the Agency as to the particular method it must use to make the finding. Historically, however, EPA has used modeling to determine the presence or absence of such an impact. See, e.g., Air Pollution Control District of Jefferson County, 739 F.2d at 1077-79 (Agency reliance on modeling); New York v. EPA, 852 F.2d at 580 (Agency criticism of insufficient modeling). Moreover, EPA notes that §126 implicitly contemplates that EPA may use modeling to assess significant contribution. In particular, §126(b) provides that any State may petition for a finding that any source or group of sources "emits or would emit" in violation of §110. This construction indicates that EPA may determine whether sources would violate the provision now or in the future, thereby requiring that the Agency would have to model to determine whether there would be a future significant contribution to nonattainment or interference with maintenance in the petitioning State. This anticipation of prospective significant contribution is likewise implicit in §126(a) which provides for notice in advance of construction of major

new sources or the modification of existing sources that would have the same effect. Thus, §126 not only does not preclude EPA from modeling to make a finding, it logically requires it in the case of petitions alleging future significant contributions to nonattainment or interference with maintenance. To interpret §126 to forbid the use of modeling to predict future air quality conditions would be inconsistent with the statute and absurd.

Second, EPA notes that the commenters appear to misunderstand how the Agency did use both monitoring data and modeling to project whether areas will be in nonattainment of the 8-hour standard in the future for purposes of this action. EPA did obtain monitoring data which demonstrated that many areas in the petitioning States are currently violating the 8-hour standard. At the outset of the process, EPA thus relied on actual monitored data of the type desired by the commenters. As described in more detail in the NPR, EPA then utilized modeling to determine which areas currently violating the 8-hour standard would be likely to continue to violate the 8-hour standard in 2007, factoring in expected ozone reductions and concomitant air quality improvements from Federal and State control measures. Significantly, EPA used

modeling not to add areas to the list of nonattainment areas, but rather to subtract from the list of areas already shown through monitoring data to be in violation of the 8-hour standard at this time. EPA believes that this conservative approach is a reasonable means to anticipate which areas will continue to be in nonattainment of the 8-hour standard unless sources in upwind States undertake additional control measures. By contrast, the commenters imply that EPA cannot possibly determine which areas will be in nonattainment in a future year unless EPA waits until that year for actual monitored data showing that nonattainment. Such an approach would be inconsistent with the provisions of §126 as discussed above, and would be illogical because it would preclude EPA from encouraging upwind States to obtain emission reductions that the Agency can now reasonably identify through modeling as necessary for downwind States to achieve attainment of the 8-hour standard as expeditiously as practicable.

(c) Finding of significant contribution to nonattainment under the 8-hour standard before submissions of SIPs in accordance with §172. The commenters also argued that EPA cannot make a finding under §126(b) using the 8-hour ozone standard because

of timing issues. In the NOx SIP Call, EPA concluded that States must submit SIPs for the new 8-hour standard in accordance with the schedule in §110(a)(1), i.e., within three years after promulgation of a new or revised NAAQS. The commenters claimed that such a timetable is unauthorized under the CAA and that EPA must follow the schedule set forth in §172(b), which provides that SIPs required to satisfy nonattainment areas are due three years after the designation of an area as nonattainment pursuant to §107(d). Because EPA has stated that it intends to complete the designation process for nonattainment areas under the 8-hour standard in 2000, the commenters reason that SIPs to address that nonattainment would not be due until 2003. Following that reasoning, the commenters argued that because of the schedule set forth in §172(b), EPA cannot now use violations of the 8-hour standard in connection with petitions under §126.

For the reasons detailed in the NOx SIP Call, EPA disagrees with the contentions of the commenters concerning the timing of the NOx SIP Call and SIPs to implement the 8-hour standard. See, 63 FR 57,356, 57,372-74. With respect to today's action under §126(b), EPA reiterates that §§110(a)(1) and (2) authorize the Agency to require SIP revisions to

address SIP requirements in §110(a)(2)(D) on the schedule set forth in the NOx SIP Call.

EPA also notes that §126 itself contains no reference to §172 as a timeline for requiring SIP revisions or implementation of necessary emission reduction requirements as a result of a finding under §126(b). In fact, §126(c) specifically stipulates that existing sources may not continue to operate longer than three months after a §126(b) finding unless the source "complies with such emission limitations and compliance schedules ...as may be provided by the Administrator." If EPA extends the compliance period, §126(c) provides that the source must comply "as expeditiously as practicable, but in no event longer than three years after such compliance." EPA believes that the explicit provisions of §126 refute the commenters' implication that the Agency cannot take action under §126(b) until after the designation of nonattainment areas and submission of SIPs for the 8-hour standard and the ultimate potential compliance date, i.e., potentially as much as ten years after designation. Having established that sources in upwind jurisdictions will significantly contribute to ozone nonattainment or interfere with maintenance in the petitioning States, EPA has authority to take action

and to require compliance in the time frame that the Agency believes will allow attainment as expeditiously as practicable.

Although the commenters claimed that it is absurd to grant the §126 petitions now because this action will require upwind emission reductions prior to forcing downwind areas to implement all statutorily required or necessary controls, EPA disagrees. As explained in connection with the NOx SIP Call, downwind nonattainment areas have historically borne the brunt of controls designed to reduce ozone and ozone precursors for many years. In spite of these efforts, many areas have had difficulty meeting the 1-hour ozone standard because of the influx of ozone and ozone precursors from upwind jurisdictions. Under the new 8-hour standard, monitoring data indicate that more and larger areas will potentially be in nonattainment. EPA therefore believes that it is even more important to implement regional control strategies to mitigate interstate pollution in order to assist downwind areas in achieving attainment. As such, the granting of the §126 petitions is not an effort "to enforce the 8-hour standard" prematurely as alleged by the commenters, but rather the exercise of appropriate authority to begin to alleviate emissions that are already contributing to

ambient air conditions which exceed that standard. This action will help meet the statutory objective of achieving attainment as expeditiously as practicable.

(d) Finding of significant contribution under the 8-hour standard in light of President Clinton's implementation plan for the standard. Commenters also claimed that EPA's use of the 8-hour ozone standard for purposes of the proposed §126 finding was inconsistent with President Clinton's Memorandum of July 16, 1997, entitled "Implementation of Revised Air Quality Standards for Ozone and Particulate Matter" (the "Implementation Memo"). See, 62 FR 38,421 (July 18, 1997). That document accompanied EPA's promulgation of the new 8-hour NAAQS for ozone. The commenters noted that the Implementation Memo made explicit reference to the statutory timeline for implementation of the new 8-hour standard and indicated that there would be up to three years to designate nonattainment areas under the new 8-hour standard, up to three more years to develop SIPs for the new 8-hour standard, and up to a total of ten years from designation to comply with the new 8-hour standard. The commenters implied that the presence of the "general timeline" in the Implementation Memo precludes EPA from making a finding of significant contribution under §126 using the 8-hour

standard at this time.

EPA disagrees that today's finding is inconsistent with the Implementation Memo. EPA believes that the commenters have overlooked key passages of the Implementation Memo which make clear that the Agency is to take action to alleviate regional transport of ozone and ozone precursors immediately, rather than to wait until formal designation of nonattainment areas under the 8-hour standard.

Contrary to the commenters' implications, the Implementation Memo does not state that EPA is to do nothing to implement the 8-hour ozone standard until after designation of nonattainment areas and submission of SIPs. The document explicitly discussed the need for a regional strategy to address ozone nonattainment and the investigation of strategy options by the Ozone Transport Assessment Group (OTAG) to alleviate interstate transport of ozone. See, 62 FR at 38,425. In particular, the Implementation Memo stated "that EPA will propose a rule requiring States in the OTAG region that are significantly contributing to nonattainment or interfering with maintenance of attainment in downwind States to submit SIPs to reduce their interstate pollution." Id. This was a clear reference to the NOx SIP Call. The Implementation Memo promised issuance of

the NOx SIP Call final rule in September of 1998, well in advance of designation of nonattainment areas for the 8-hour standard. Significantly, the Implementation Memo did not indicate that EPA would restrict the NOx SIP Call to nonattainment areas under the old 1-hour standard. To the contrary, the document stated, inter alia, that : "Most important, based on the EPA's review of the latest modeling, a regional approach, coupled with implementation of already existing State and Federal Clean Air Act requirements, will allow the vast majority of areas that currently meet the 1-hour standard but would not otherwise meet the new 8-hour standard to achieve healthful air without additional local controls." Id. In other words, the Implementation Memo contemplated that control measures under the NOx SIP Call would help alleviate nonattainment of the 8-hour standard. Rather than suggesting that EPA is to defer any action to ensure reductions in emissions that contribute to regional ozone transport to achieve the 8-hour standard, the Implementation Memo clearly contemplated that EPA should and would take appropriate action in advance of designations.

Similarly, with regard to the "transitional classification," the Implementation Memo provided that:

"Because many areas will need little or no additional new local emission reductions to reach attainment, beyond those reductions that will be achieved through the regional control strategy, and will come into attainment earlier than otherwise required, the EPA will exercise its discretion under the law to eliminate unnecessary local planning requirements for such areas." Id. The referenced "regional control strategy" is the NOx SIP Call. Again, the Implementation Memo not only does not direct inaction on the 8-hour standard, it specifically presumes that EPA will take action on a regional basis to mitigate ozone transport without regard to whether or not it has formally designated areas as nonattainment for the 8-hour standard.

In short, EPA believes that the Implementation Memo reflected the intention that EPA is to take appropriate advance action to ensure future compliance with the 8-hour standard, and that such action should specifically include a regional strategy to reduce ozone and ozone precursors such as NOx. It is not reasonable to assume that EPA must wait up to three years for formal designation of nonattainment areas, much less the additional three years for development of nonattainment SIPs or up to twelve years for full

compliance, before it may take appropriate action to address interstate transport under §110(a)(2)(D)(i), whether in the form of the NOx SIP Call, as specifically contemplated in the Implementation Memo, or otherwise under §126. At the time of the Implementation Memo, EPA had not yet proposed to take action on the §126 petitions and thus the absence of references to those petitions is not significant. Like the NOx SIP Call, EPA's action under §126 is based upon a finding of significant contribution by sources in upwind States. Like the NOx SIP Call, EPA's action on the §126 petitions is premised on the need to achieve regional reductions in ozone and ozone precursors in order to enable all States to achieve the 8-hour standard expeditiously. EPA's finding under §126 is consistent with the Implementation Memo.

D. EPA's Interpretation of Section 126: Remedy

In the NPR, EPA proposed a set of controls that would apply if any of the petitions were granted. The EPA further proposed the maximum of the 3 years allowed by the statute from the date of the final approval of a section 126 petition to the date that the affected upwind sources must implement controls that EPA may promulgate. The EPA further proposed that if the petitions were granted during the fall of 1999, EPA

would grant a maximum of 3 years from the beginning of the next ozone season. The EPA received numerous comments on this aspect of the rulemaking.

1. Three-Year Period

Some commenters sought a longer-than-3-year period, but EPA continues to believe that the section 126(c) provisions that establish this period should be interpreted as establishing a ceiling of no more than 3 years for implementation.

2. Uniform Level of Controls

a. Comments

Commenters argued that EPA has not justified uniform control levels on upwind sources in light of the varying impacts among the different upwind sources and the downwind receptors. These commenters stressed that in general, the greatest part of a downwind area's nonattainment problem results from emissions local to the downwind area; that the next greatest part of the problem results from emissions in adjoining States; and that emissions from further upwind States are a relatively small part of the problem. According to these commenters, it would be more cost-effective in terms of ambient impact to focus more controls on sources in the local and adjoining areas.

The commenters further stated that the fact that the section 126 petitions present fewer downwind receptors (compared to the NOx SIP call) that are concentrated in the northeast renders the uniform remedy particularly suspect. Commenters added that EPA concerns about the difficulty of establishing a remedy with state-by-state variations was not a valid reason if state-by-state variations were otherwise justifiable.

b. Response

The EPA's response to these comments is similar to EPA's response to comments that EPA should establish a bright-line approach for determining significant contribution. That is, EPA believes its uniform approach to the remedy is reasonable, regardless of whether other approaches would also be considered reasonable.

Moreover, EPA's approach to the remedy stems directly from its interpretation of the significant contribution test. EPA's interpretation incorporates the application of cost-effective controls to determine the amount of emissions considered to contribute significantly. This application is, by its terms, uniform among all upwind sources.

EPA believes that this approach to the significant

contribution determination, and thus to the remedy, is reasonable. As noted above, sections 126(b)/110(a)(2)(D)(i)(I) do not include criteria for defining and applying the significant contribution test. In addition, section 126(c) does not include criteria for determining the level of controls that EPA is authorized to promulgate (except for the general requirement that the controls must be designed to "bring about compliance with the requirements contained in" section 110(a)(2)(D)[(i)] as expeditiously as practical, but in no case later than three years after the date of such finding").

In particular, Congress did not provide any requirement that local sources or adjoining sources are obligated to implement reductions sooner, or to a greater degree, than sources further away. Congress has included comparable provisions under other requirements. For example, the Clean Air Act Amendments of 1990 included section 182, which established a five-step set of graduated controls on ozone nonattainment areas. The level of control requirements for nonattainment areas increase with the severity of their nonattainment problem. At the lower and upper boundaries of this scheme, areas with "marginal" problems are required to implement a lighter

level of controls, section 182(a); and areas with "extreme" problems are required to implement a much higher level of controls, section 182(e). By comparison, in sections 126/110(a)(2)(D), Congress did not indicate more stringent sets of controls on upwind areas that immediately adjoin downwind states with nonattainment problems, and a lower level of controls on the further upwind areas.

As an additional example, section 211(c)(4)(C) provides the test for granting a waiver of Federal preemption for State fuel controls. Under this test, EPA may approve the state fuel controls only after finding that "no other measures that would bring about timely attainment exist, or if other measures exist and are technically possible to implement, but are unreasonable or impracticable." This provision illustrates that Congress knew how to require that control schemes be prioritized, and Congress chose not to include such a requirement in sections 126/110(a)(2)(D)(i)(I).

As noted above, under these circumstances, EPA believes that it has discretion under Chevron to develop a reasonable interpretation that gives effect to the statutory purposes of ameliorating air pollution transport.

For the reasons described above, EPA believes it has a valid basis for establishing controls that are highly cost-effective on section 126 sources in States whose overall NOx emissions contribute significantly to nonattainment downwind. As noted above, this approach is fully consistent with the approach Congress and EPA have taken in many other instances in which controls have been imposed on other sources. The EPA's approach results in controls on sources whose emissions have a meaningful impact on nonattainment downwind, in light of the collective contribution nature of ozone nonattainment problems.

In addition, as noted above, imposing a lower -- or even a zero -- level of controls on sources that are further away, yet still emit into the same air basin as the more highly controlled sources, would give the lesser controlled sources a competitive advantage. This competitive advantage runs contrary to one of the purposes of section 126, as expressed by the legislative history, described above, of eliminating the competitive advantages enjoyed by upwind sources at the expense of downwind sources.

Further, for the NOx SIP call rulemaking, EPA conducted air quality modeling that assumed lower levels of controls on sources in certain upwind States.

The results of this modeling generally indicated that lower levels of controls in the further-away upwind States resulted in fewer ozone reductions in the northeast nonattainment areas, compared to a uniform, higher level of control. See Air Quality Modeling Technical Support Document for the NOx SIP call, Docket A-96-56, No. VI-B-11, p. 69.

The EPA believes that the above-described reasons fully justify its decision to adopt, as the remedy, a uniform set of highly cost-effective controls. As additional reasons, EPA notes that a non-uniform remedy would create substantial administrative complexities, as described in the NOx SIP call rulemaking. In addition, in the NOx SIP call NFR, EPA determined that emissions in each upwind state––including the section 126 sources in those states–- generally contribute to several downwind nonattainment problems under the 1-hour NAAQS, and numerous downwind nonattainment problems under the 8-hour NAAQS. For some of these downwind nonattainment problems, the downwind states have submitted a section 126 petition for which EPA is today granting an affirmative technical determination; for others, the downwind State has recently submitted a section 126 petition; and for others, the downwind States have not submitted a section 126 petition.

Regardless, EPA believes that in determining whether a contribution is significant, including assessing the cost-effectiveness of the upwind controls, it is reasonable to recognize that in general, those controls will result in benefits throughout several downwind areas under the one-hour NAAQS, and numerous downwind areas under the eight-hour NAAQS. This issue is further discussed in the NOx SIP Call final rule, 63 FR 57404-05. As a result, EPA believes that the controls for each upwind State should be considered as providing benefits for at least several, and in some cases many, downwind areas. As a qualitative matter, the fact that the controls provide benefits in numerous downwind areas significantly improves the efficacy of the controls.

E. Obligations of Downwind States

1. Comments

Numerous commenters representing the interests of upwind sources and States stressed that in many cases, the petitioning States have not completed all of the SIP requirements to which they are subject under the CAA Amendments of 1990. These commenters argued that the section 126 petitions should be denied on this basis.

2. Response

The EPA disagrees that incomplete SIPs would preclude EPA from issuing findings requested by the section 126 petitioners concerning upwind sources.

The EPA responded at length to comparable comments in the NOx SIP call final rule, 63 FR 57,380, and EPA incorporates those responses into today's action. In addition, EPA has included in the rulemaking docket for today's action a set of tables identifying the SIP submittal requirements applicable to various downwind nonattainment areas under the 1990 CAA Amendments, and summarizing the progress made by the downwind states in completing their requirements. Although the downwind States have not yet complied with some SIP submittal requirements, they have complied with the vast majority of those requirements.

In addition, neither section 126(b)-(c) nor section 110(a)(2)(D) contains any requirements that the section 126 petitioners or other downwind states complete their SIP requirements before they become entitled to the section 126/110(a)(2)(D) protections. By comparison, in other CAA provisions, Congress required compliance with SIP requirements before a State with a nonattainment area would be eligible for certain benefits. See section 107(d)(3)(E)(ii) and (v)

(nonattainment area may be redesignated to attainment only if, among other things, SIP has been approved and State has met applicable requirements); section 181(a)(5)(A) (nonattainment area may receive an extension of attainment date if, among other things, State has complied with all SIP requirements). Congress did not establish such strictures with respect to the downwind State under sections 126(b)-(c) or 110(a)(2)(D)(i)(I).

In addition, as EPA pointed out in the NOx SIP call final rule, 63 FR 57,380, air quality modeling shows that even if the downwind states were to comply fully with all of the specifically required CAA controls, they would continue to experience nonattainment problems to which emissions from sources in the upwind States are contributing.

F. Effect of 1-Hour Attainment

In the section 126 NPR, EPA proposed which upwind States contain sources of emissions named in the petitions that contribute significantly to nonattainment problems in the petitioning States under the 1-hour ozone standard, and where petitions were based on it, the 8-hour ozone standard that EPA promulgated to replace the 1-hour ozone standard. These linked upwind States, which are identified in

Tables II-1 and II-2 in the section 126 NPR (63 FR 56303), were based on determinations made in the NOx SIP call. After the publication of the section 126 NPR, two additional states, Maine and New Hampshire, submitted petitions under the 8-hour ozone standard. EPA published a supplemental proposal regarding those petitions on March 3, 1999 (64 FR 10342).

After publication of the section 126 NPR on October 21, 1998, EPA preliminarily determined that the air quality data for 1996-1998 for certain areas in the petitioning states indicated that those areas–-which were still violating the 8-hour ozone standard--were no longer in violation of the 1-hour ozone standard. These areas were: Boston-Lawrence-Worcester, Massachusetts-New Hampshire; Portland, Maine; Portsmouth-Dover-Rochester, New Hampshire; and Providence, Rhode Island (63 FR 69598, December 17, 1998).[25] In addition, EPA believes that the 1996-98 air quality data for Pittsburgh, Pennsylvania, indicates that Pittsburgh has attained the 1-hour ozone standard. If EPA reaches a final determination that

[25]Based on these data, EPA published a notice of proposed rulemaking on December 17, 1998 (63 FR 69598), in which the Agency proposed to determine that the 1-hour standard had been achieved in these areas and would no longer apply to those areas.

these areas have attained the 1-hour standard, EPA will conclude that the 1-hour standard will no longer apply anywhere in Maine, New Hampshire, and Rhode Island. The 1-hour standard will still apply to certain areas in Massachusetts and Pennsylvania. Moreover, all of these areas currently violate the new 8-hour standard that EPA promulgated to replace the 1-hour standard.

Because EPA has preliminarily determined that these areas no longer have air quality in violation of the 1-hour standard, EPA believes it would not be appropriate for EPA to consider them as downwind receptor areas for purposes of determining whether upwind areas are significantly contributing to 1-hour nonattainment in these areas. While EPA has not yet made a final determination that these areas are attaining the 1-hour standard, EPA believes that, in light of the air quality monitoring data for 1996-98 for these areas, it is prudent to delete them as receptor areas for purposes of this action under section 126.

It is important to note that the more protective 8-hour ozone standard applies in all of these areas. Pennsylvania, Maine, Massachusetts, and New Hampshire all petitioned EPA under both the 1-hour and 8-hour ozone standards. A determination that any of the areas

in these States has air quality meeting the 1-hour standard does not affect EPA's significant contribution determinations under the 8-hour standard with regard to 8-hour nonattainment and maintenance problems in these States. Indeed, the deletion of these areas as receptor areas for the 1-hour standard has no impact whatsoever on which States EPA has identified as contributing to ozone problems in the petitioning States. In fact, more upwind States were identified as contributors based on the 8-hour standard than on the 1-hour standard. As no upwind States were identified as contributors based solely on Rhode Island's 1-hour petition, the deletion of Rhode Island as a 1-hour receptor does not affect the conclusions as to the identification of which sources are significant contributors.

The original comment period on the section 126 NPR closed on November 30, 1998, prior to EPA's preliminary determination that these areas had monitored attainment of the 1-hour standard based on 1996-98 monitoring data. As discussed in Section I.G.2, at the request of two commenters, EPA reopened the section 126 NPR comment period to take comment on the impacts of the 1996-98 air quality data on the section 126 rulemaking.

The majority of the commenters agreed that EPA

should deny petitions based on the 1-hour standard that seek findings against upwind sources with regard to downwind areas where the 1-hour standard is met.

Several of the petitioning States commented that a determination that an area had attained the 1-hour standard should not alter EPA's proposed findings of significant contribution related to those specific areas. The States argued that such a determination does not guarantee that the 1-hour standard will be maintained in the future. Two of the States suggested that favorable meteorology may have been a large factor in the current attainment conditions and that the upwind sources are still significantly impacting the areas.

As discussed in Section I.B., the 8-hour ozone standard is intended to fully replace the 1-hour standard. However, when EPA promulgated the 8-hour standard, it decided that the 1-hour standard would continue to apply in an area for an interim period until the area achieved attainment of that standard. Once EPA makes a final determination that the 1-hour standard is attained, the standard will be revoked and States are expected to focus their planning efforts on developing strategies for attaining the 8-hour standard. As mentioned previously, attainment of the

1-hour standard does not impact EPA's action on a petition under the more stringent 8-hour standard. To the extent that a State has 8-hour ozone problems, a State may seek a finding under that standard. In this rulemaking, a finding under the 8-hour standard yields the same requirements for upwind emissions reductions as a finding under the 1-hour standard.

Several commenters said that the 1996-98 air quality data indicating attainment of the 1-hour standard in some areas in the Northeast indicates that there is a trend in air quality improvement, even without the section 126 control measures and, therefore, the petitions should all be denied. The EPA agrees that there are general downward trends in ozone concentrations in the Northeast. The EPA has reported the air quality changes over the 10-year period 1988 to 1997 in the document, "National Air Quality and Emissions Trends Report, 1997" (Trends Report) (EPA 454/R-98-016). However, EPA cautions that the air quality trends are historical records of what has occurred and alone do not indicate future trends. Ambient ozone trends are influenced by year-to-year changes in meteorological conditions, population growth, VOC to NOx ratios, and changes in emissions from ongoing control measures. The EPA does not agree

that current trends indicate that new NOx control programs are not necessary. Rather, the data help show that NOx and VOC controls can be very effective in reducing ozone. Since passage of the CAA Amendments in 1990, States have implemented many new VOC and NOx emissions control programs which have helped to reduce ozone levels. However, for many areas, these reductions have not been sufficient to provide for attainment of the 1-hour and/or 8-hour standard. In addition, the majority of the areas in the Northeast do not show significant downward trends in emissions (See Trends Report maps, pages 58-59). For example, New York City and Philadelphia show no significant downward (or upward) trends for the 1-hour and 8-hour standards over the past few years (See Trends Report, pages 160 and 162). In order to see future air quality improvements, EPA believes additional control measures are necessary to reduce emissions and offset growth. The section 126 petitions are one way in which States are seeking to ensure that their transported emissions are reduced.

Furthermore, there is no basis for denying all of the petitions on the basis of any such trend. All of the petitioning States contain areas that violate the 8-hour standard and there are many areas in the

Northeast that still violate the 1-hour standard.

The EPA received comments that the modeling is flawed because it projects 1-hour nonattainment for 2007 in areas for which the 1-hour NAAQS is proposed to be revoked based on current monitoring data. The most recent three years had meteorological conditions in the Northeast such that the emissions during this time period did not result in nonattainment in the identified areas. The extent to which meteorological conditions are conducive to ozone exceedences in a particular area varies from year to year. As noted above, several commenters suggested that the meteorology during 1996-1998 in the Northeast was not particularly conducive to high ozone. Thus, if meteorological conditions similar to those modeled by OTAG and used for the SIP Call occur in the future, it is expected that ozone concentrations >=125 ppb would recur in these areas, which is consistent with what the modeling predicts. The fact that meteorological conditions vary is one of the reasons EPA relied on both current monitoring and projected future modeled predictions to determine which areas should be considered to be downwind nonattainment receptors to provide a more robust test for that determination.

G. [Section G is being retained for organizational

purposes only]

H. Weight of Evidence Determination of Named Upwind States

1. General Approach

The EPA proposed to rely on the conclusions it drew in the final NOx SIP call rulemaking to determine whether the emissions in named upwind States contribute significantly to the 1-hour and 8-hour nonattainment and maintenance problems in the petitioning States[26]. In the final NOx SIP call rulemaking, EPA used a weight-of-evidence approach involving various factors, including air quality impacts. To determine this latter factor, EPA relied on three sets of modeling information: the OTAG subregional modeling together with other information such as emission density and transport distance, confirmed by the State-by-State UAM-V zero-out modeling and the State-by-State CAMx source apportionment modeling. The upwind State-to-downwind nonattainment linkages in the final NOx SIP call rulemaking were used as the basis for the proposed

[26]The maintenance standard does not apply in the case of the 1-hour NAAQS because, under the regulation EPA promulgated in connection with the 8-hour NAAQS, once an area attains the 1-hour NAAQS, EPA determines that the area is no longer subject to it. For convenience, references to nonattainment problems under the 8-hour NAAQS also include the maintenance standard.

section 126 findings.

The EPA is using this same information and reaffirming these linkages as the basis for the related affirmative technical determinations in today's rulemaking, as well as the denials of parts or all of certain petitions. Specifically, EPA evaluated the petitions in terms of which upwind States named in each petition were found in the NOx SIP call to contribute significantly to nonattainment in the petitioning State. Separate determinations were made for the 1-hour and 8-hour NAAQS. The technical details of the modeling information are described in the final NOx SIP call rulemaking. Except as noted below, EPA is today making affirmative technical determinations concerning emissions from identified sources found in upwind States whose overall emissions were determined in the NOx SIP call final rule to contribute significantly to the petitioning State's nonattainment problems. In making these affirmative technical determinations, and in denying part or all of certain petitions, EPA is reaffirming the findings it made in the NOx SIP call final rulemaking concerning the upwind-State downwind-nonattainment area linkages related to those determinations, on the basis of the same technical data relied on in that rulemaking. For this, EPA is

primarily relying on the UAM-V State-by-state zero-out modeling runs and the CAMx modeling runs.

The EPA received a number of comments on the modeling and other technical information relied on in the proposal. Those comments which are most relevant to the technical aspects of this rulemaking are addressed below or in the RTC document.

2. Collective Contribution

The EPA received comments that it is inappropriate to use modeling that evaluates the downwind contribution from all manmade emissions in an entire State for the purposes of evaluating the section 126 petitions since these petitions request relief from large stationary sources which are only a portion of the States' total emissions and/or from sources located in only a portion of the upwind State. This comment, and EPA's response, is discussed above.

As noted above, part of EPA's response to this comment refers to the collective contribution approach. Under this approach, if the total NOx emissions from an upwind State contribute significantly to a downwind petitioning State, then each large stationary source's emissions in the upwind State or portion of the upwind State covered by the petition, is considered to be a significant contributor to nonattainment. The EPA

noted above that even though large point sources, like those covered by the 126 petitions, are only a portion of the total NOx emissions in each State, they comprise a sizable portion of the NOx inventory. For 17 of the 20 jurisdictions (Connecticut, Rhode Island and the District of Columbia are the exceptions) NOx emissions from electricity generating units and non-electricity generating point sources comprise at least one third of Statewide NOx emissions. Thus, EPA continues to believe that the full State modeling is appropriate to establish whether the named sources in specific upwind States contribute significantly to nonattainment in the petitioning State.

3. U-Runs

The EPA received comments that it is necessary to specifically evaluate the downwind contributions of large stationary sources. Although, as noted above, EPA does not think this evaluation is critical for today's rulemaking, EPA has performed a set of modeling runs in which emissions from all utility point sources and large non-utility point sources with boilers greater than 250 mmBTU were zeroed out for select groups of States. All four OTAG episodes were modeled. These model runs are referred to as the "U runs." Further details concerning these model runs are

contained in the RTC document and in the docket for this rulemaking (see Docket item number VI-D-23).

The EPA has reviewed the results of these runs which indicate that sources covered by section 126 petitions provide meaningful ozone reductions in downwind petitioning States. For example, in model run “U-10," large stationary sources in Michigan, Indiana, Ohio, Kentucky, West Virginia, and Virginia were zeroed-out. These States closely approximate the non-OTR States petitioned by New York. The results for run U-10 show contributions to nonattainment in New York of >= 2 parts per billion (ppb) to 39 percent of the 1-hour exceedances, >= 5 ppb to 14 percent of the 1-hour exceedances, and >= 10 ppb to 1 percent of the 1-hour exceedances.

4. UAM-V and CAMx Modeling and Metrics

A number of commenters said that zero-out modeling was flawed. Several of these commenters submitted modeling based on CAMx. Other commenters said that the CAMx source apportionment technique was flawed and submitted modeling based on zero-out runs. The comments concerning the technical adequacy of these modeling techniques are addressed in the RTC document. The EPA relied on both UAM-V zero-out modeling and CAMx source apportionment modeling in order to identify the

significant upwind-downwind linkages. In the evaluation by EPA of contributions for individual linkages, both modeling techniques had to indicate a significant contribution in order for the linkage to be found significant. After reviewing the comments submitted by proponents and opponents of each of these two modeling techniques, EPA has concluded that the most technically credible approach is to continue to rely on both techniques and not base its decisions of the significance of individual linkages on one technique or the other. This is discussed in further detail in the RTC document.

Several commenters submitted a technical report intended to quantify the uncertainty in the UAM-V model predictions. These commenters argued that the contributions which EPA found significant are within the "noise" of the modeling. The EPA has reviewed that study and determined that (1) the results do not indicate any bias in the model predictions as being either too high or too low and (2) there is no indication of any bias in the model's response to emissions reductions or the ability of the model to predict the contribution of emissions in upwind States to downwind nonattainment. This is discussed in further detail in the RTC document.

Several commenters made general assertions that EPA was not clear in its definition of significant contribution, and was inconsistent, subjective, or arbitrary in its determination that certain States do not make a significant contribution, but that other States do. EPA believes that its definition of significant contribution is reasonably clear and consistently applied. EPA's examination of the linkages raised by the commenters does not reveal inconsistencies. This issue is discussed further in the RTC.

In the proposal EPA requested comment on the individual upwind-downwind linkages and, in particular, the linkages between some of the more distant States, such as Alabama to Pennsylvania and Missouri to Pennsylvania.

Several commenters were critical of EPA's finding that emissions from Missouri contribute significantly to 8-hour nonattainment in Pennsylvania. One of these commenters submitted an analysis of contribution using many of the metrics EPA calculated from the State-by-State zero-out and source apportionment modeling. In this analysis, the commenter applied numerical criteria, used as a bright-line test, to judge the significance of the contributions indicated by each

metric. The commenter then applied a numerical scoring system to evaluate the overall significance of each individual linkage. The commenter used the results of this analysis to argue that Missouri does not contribute significantly to Pennsylvania. The EPA agrees that the scoring system concept provides a way to quantify and numerically compare the significance of individual linkages. However, the commenter provided no technical justification for the criteria used in this analysis or for selecting the cut-off value used to determine whether or not the final score for each linkage indicates a significant contribution. The EPA disagrees that using a single final cutoff value is the appropriate way to distinguish between significant and insignificant contributions. In this regard, EPA believes that technical judgement, based on an evaluation of all of the metrics for each linkage, as described elsewhere in today’s rulemaking, is necessary for decisions on which linkages are significant.

Regarding the linkage between Alabama and Pennsylvania under the 8-hour NAAQS, several commenters submitted an independent study of EPA's modeling of Alabama's contribution to 8-hour nonattainment in Pennsylvania. These commenters concluded from this study that the largest contributions from Alabama occur

in Pennsylvania on a single day in one episode. The study also includes a limited comparison of the observed winds at 7 a.m. each day against the corresponding wind data used in the modeling. For some wind observation stations between Alabama and Pennsylvania, the data presented in the study indicate that the observed winds are more westerly and/or northwesterly than those used in the modeling. The commenter also notes uncertainties in the modeled wet deposition calculations and modeled ozone overpredictions. The commenter concludes from these data that in light of "improper model assumptions", a determination of a significant impact on 8-hour nonattainment in Pennsylvania is arbitrary.

The EPA has reviewed the data submitted by the commenters along with the transport pattern of ozone from Alabama predicted by both the UAM-V zero-out and the CAMx source apportionment modeling together with the full set of data concerning observed and modeled winds aloft. Based upon a comprehensive review of observed and modeled data, EPA concludes that (1) the winds used in the model adequately represent the transport pattern between Alabama and Pennsylvania during this time period, (2) model performance was acceptable for the full domain and the Southeast and

Midwest OTAG regions (3) EPA is not aware of errors in the modeling due to wet deposition calculations and (4) the ozone "plume" from Alabama is geographically extensive, covering a large portion of Pennsylvania, as indicated by both the zero-out and source apportionment modeling. Thus, there is no basis for EPA to change its conclusion relative to the significance of Alabama's contribution to 8-hour nonattainment in Pennsylvania. This is discussed further in the RTC document.

Several commenters stated that EPA's modeling indicates that much of the downwinds' ozone problem is due to local emissions. The EPA agrees that local emissions are a large part of the overall ozone problem in most major cities in the OTAG region. However, the collective contribution from upwind sources to ozone in these areas is also quite large. For example, the average contribution from upwind manmade emissions to 1-hour nonattainment in New York City is 45 percent (28 percent from States outside the Northeast), 83 percent in Greater Connecticut (21 percent from States outside the Northeast), and 32 percent in the Philadelphia nonattainment area (all from States outside the Northeast).

Some commenters questioned why the available

modeling information was not sufficient for EPA to make a final decision on whether certain States in the OTAG domain (e.g., New Hampshire, Maine, and Vermont) contribute significantly to nonattainment in downwind States. As stated above, EPA primarily relied on two types of modeling for making a determination of significant contribution. This included State-by-State UAM-V zero-out and CAMx source-apportionment modeling. For an upwind-downwind linkage to be significant, contributions from both of the State-by-State techniques had to show significant contributions. For 15 States in the OTAG domain, including those identified by these commenters, EPA does not have a complete set of modeling comparable to that relied on for those States found to be significant. Thus, as part of the NOx SIP call, EPA deferred taking final action on these States. This is discussed further in the RTC document.

The upwind States that were named by the petitioners and which are found to contain sources that make a significant contribution to nonattainment in the petitioning States are based on the upwind-downwind linkages found to be significant in the NOx SIP call. The exception to this is Maine's petition for relief from emissions in North Carolina. In its petition,

Maine requested relief from large stationary sources within a 600 mile radius of the southwestern most nonattainment area in Maine. This radius includes several counties in the extreme northeastern portion of North Carolina that do not contain sources of the type and size identified in Maine's petition. Thus, even though EPA found that emissions in North Carolina contribute significantly to 8-hour nonattainment in Maine, EPA is denying Maine’s petition relative to North Carolina because there are no section 126 sources located in the portion of North Carolina covered by Maine’s petition.

The significant upwind-downwind linkages applicable to the section 126 petitions are listed in Tables II-1 for the 1-hour NAAQS and Table II-2 for the 8-hour NAAQS. The linkages in Table II-1 take into account the recent revocations of the 1-hour NAAQS for certain 1-hour nonattainment areas. All of the information contained in the docket of the NOx SIP call rulemaking that is relevant to the determination of significant contribution is incorporated by reference into today's rulemaking.

Table II-1. Named Upwind States which Contain Sources that Contribute Significantly to 1-hour Nonattainment

in Petitioning States.

Petitioning State (Nonattainment Area)	Named Upwind States
New York (New York City)	DC, DE, IN, KY, MD, MI, NC, NJ, OH, PA, VA, WV
Connecticut (Greater Connecticut)	DC, DE, IN*, KY*, MD, MI*, NC*, NJ, NY, OH, PA, VA, WV
Pennsylvania (Philadelphia)	NC, OH, VA, WV
Massachusetts (Western Massachusetts)	WV
Rhode Island	None**
Maine	None**
New Hampshire	None**
Vermont	None**
Total	DC, DE, IN, KY, MD, MI, NC, NJ, NY, OH, PA, VA, WV

*Upwind States marked with an asterisk are considered to significantly contribute because they contribute to an interstate nonattainment area that includes part of the petitioning State. Part of Connecticut is included in the New York City nonattainment area.
**Based on 1996-1998 air quality monitoring data, EPA cannot now determine that areas in these States continue to be in nonattainment for the 1-hour NAAQS.

Table II-2. Named Upwind States which Contain Sources that Contribute Significantly to 8-hour Nonattainment in Petitioning States.

Petitioning State	Named Upwind States
Pennsylvania	AL, IL, IN, KY, MI, MO, NC, OH, TN, VA, WV

Maine	**CT, DC, DE, MA, MD, NJ, NY, PA, RI, VA**
Massachusetts	**OH, WV**
New Hampshire	**CT, DC, DE, MD, MA, NJ, NY, PA, RI**
Vermont	**None**
Total	**AL, CT, DC, DE, IL, IN, KY, MA, MD, MI, MO, NJ, NY, NC, OH, PA, RI, TN, VA, WV**

The EPA concluded from all of the information considered that the 20 jurisdictions listed below contain sources that make a significant contribution to nonattainment in, or interfere with maintenance by, one or more petitioning States under the 1-hour and/or the 8-hour NAAQS:

Alabama,

Connecticut,

Delaware,

District of Columbia,

Illinois,

Indiana,

Kentucky,

Maryland,

Massachusetts,

Michigan,

Missouri,

New Jersey,

New York,

North Carolina,

Ohio,

Pennsylvania,

Rhode Island,

Tennessee,

Virginia, and

West Virginia.

I. Identifying Sources

As discussed previously in Section I.D., all of the petitions named specific upwind source categories as significantly contributing to nonattainment in, or interfering with maintenance by, the petitioning State. Four petitioning States (Massachusetts, New Hampshire, New York, and Rhode Island) also attempted to identify the existing sources in the targeted source categories. However, the petitioners cautioned EPA that the lists might not be complete and that any omissions were unintentional. In addition, the EPA has received several comments from sources on the State lists saying

that they do not meet the source category definitions provided in the petitions.

In the final NOx SIP call (63 FR at 57427), EPA provided the opportunity for comment on source-specific inventory data revisions for the data used to establish each State's base inventory and budget. Furthermore, EPA extended that comment period to February 22, 1999 (63 FR 71221). At the same time, EPA reopened the comment period for the proposed section 126 and the proposed FIP for the same source-specific inventory data revisions. Based on these comments, EPA will be finalizing a list of existing sources in the source categories for which EPA is making an affirmative technical determination. These sources will be included in the Federal NOx Budget Trading Rule which EPA intends to promulgate in July. The source categories named in the petitions that EPA is making affirmative technical determinations are large EGU boilers and turbines and large non-EGU boilers and turbines. The EPA's methodology for determining if a boiler or turbine fits in the EGU or the non-EGU category and whether it is large or small are explained below. The EPA's rationale for determining that large EGU boilers and turbines and large non-EGU boilers and turbines contribute significantly is explained in

Section II.J below.

1. Proposed EGU Source Classification

The section 126 NPR proposed the same two-step approach as used in the final NOx SIP call for determining which of the following categories a boiler or turbine fits into: large EGU, small EGU, large non-EGU, or small non-EGU. In the final NOx SIP call, EPA first determined if a boiler or turbine should be classified into the category of EGU or non-EGU. The EPA then determined if the boiler or turbine should be classified as large or small.

The EPA used three sources of data for determining if an existing generator's purpose included generation of electricity for sale and thus qualified the unit connected to the generator as an EGU. First, EPA treated as EGUs all units that are currently reporting under title IV of the CAA. Second, EPA included as EGUs any additional units that were serving generators reporting to the Energy Information Administration using Form 860 in 1995. Form 860 is submitted for utility generators. Third, EPA included units serving generators that reported to Energy Information Administration using Form 867 in 1995. Since Form 867 is submitted by non-utility generators, including generators "which consume all of their generation at

the facility," EPA excluded any units for which EPA had information indicating that the unit was not connected to any generators that sold any electricity. This was determined by excluding units that were not listed as sources that sell power under contract to the electric grid using the electric generation forecasts of the North American Electric Reliability Council.

Once EPA determined that a boiler or turbine should be classified as an EGU, EPA considered that unit to be a large EGU if it served a generator greater than 25 MWe and considered it a small EGU if it served a generator less than or equal to 25 MWe.

The EPA explained that there are two important reasons that the methodology outlined above is not appropriate to use on an ongoing basis for new boilers or turbines. First, EPA was concerned about the completeness of data using this methodology. The EPA had this concern because there are limited consequences to not reporting to Energy Information Administration and because EPA has no assurance that sources will continue to be required to report to Energy Information Administration using the same forms. Second, because of changes in the electric generation industry and because of regulatory developments such as the NOx SIP call, owners and operators of units may have an

incentive to install, operate and sell electricity from small (25 MWe or less) generators connected to larger boilers or turbines that are primarily used for industrial processes and not electricity generation. Such sources could have significant NOx emissions.

To ensure that owners and operators of such units did not install a small generator and sell small amounts of electricity merely to circumvent the requirements of this rule, EPA established a slightly different process for categorizing units that commenced operation on or after January 1, 1996. First, EPA explained it would classify as an EGU any boiler or turbine that is connected to a generator greater than 25 MWe from which any electricity is sold. This would be based on information reported directly to the State under the SIP (or EPA in the case of a FIP or section 126 action). The EPA stated that this addresses the first concern about completeness of data, as discussed in the previous paragraph. Second, if a boiler or turbine is connected to a generator equal to or less than 25 MWe from which any electricity is sold, it would be considered a small EGU if it has the potential to use more than 50.0 percent of the usable energy from the boiler or turbine to generate electricity. For example, this means that a 260 mmBtu boiler connected

to a 20 MWe generator that is used to generate some electricity for sale would be considered a small EGU. On the other hand, a 600 mmBtu boiler connected to a 20 MWe generator that is used to generate some electricity for sale would be considered a large non-EGU. This addressed EPA's second concern (discussed in the previous paragraph) about owners or operators of large boilers and turbines that have small generators.

All other boilers and turbines (including boilers and turbines connected to generators equal to or less than 25 MWe from which any electricity is sold and which have the potential to use 50.0 percent or less of the usable energy from the boiler or turbine to generate electricity) were considered non-EGUs. The EPA stated that it will use the process described below to classify those units as large or small. The EPA stated that, once a unit had been classified in the base inventory, EPA did not intend to reclassify that unit, but explained that it might reconsider unit classification in 2007 along with the 2007 transport reassessment.

2. Proposed Non-EGU Boiler and Turbine Source Classification

In the section 126 NPR, the non-EGU point source categories that EPA determined to be subject to the

section 126 reduction requirements are large boilers and turbines. The EPA proposed in the section 126 NPR to use the same method to identify “large” and “small” non-EGU boilers and turbines that was used in the final NOx SIP call (for more detailed information refer to “Development of Modeling Inventory and Budgets for Regional SIP Call,” September 24, 1998). The methodology is as follows:

1. Where boiler heat input capacity data were available for a unit, EPA used that data. Units with such data that are less than or equal to 250 mmBtu are “small” and units greater than 250 mmBtu/hr are “large.”
2. Where boiler heat input capacity data were not available for a unit, EPA estimated that data, as described in the NOx SIP call NPR and SNPR. Units estimated to be greater than 250 mmBtu/hr are “large.”
3. Where boiler heat input capacity data were not available for a unit and where the boiler capacity was estimated to be less than 250 mmBtu/hr, EPA checked 1995 point-level emissions for each unit. If the 1995 average daily ozone season emissions were greater than one ton, the unit was categorized as a

"large" source; otherwise, the unit was categorized as a "small" source.

3. Issues Raised by Commenters on EGU/Non-EGU Classification

One commenter, representing the pulp and paper industry, argued that small cogeneration units should not be treated as EGUs and EPA should continue to apply the exemption from treatment as utility units established under new source performance standards (NSPS) and the Acid Rain Program for cogeneration units that produce an annual amount of electricity for sale less than one-third of their potential electrical output capacity or equal to or less than 25 MWe. (Note that the regulations implementing title IV converted the annual 25 MWe threshold to 129,000 MWe hrs of electricity which is equivalent to 25 MWe per hour times 8760 hours per year.) The commenter also noted that section 112 of the CAA defines "electricity steam generating unit" excluding cogeneration units using the same thresholds. The commenter made several assertions to support its argument. First, the commenter said the classification of small cogeneration units would be contrary to 20 years of Agency precedent under the NSPS and Acid Rain programs. The CAA encourages cogeneration by exempting small cogenerators below the

one-third/25 MWe trigger from the Acid Rain program and from section 112. Deviating from this historical precedent was not a logical outgrowth of the proposed NOx SIP call since the proposed NOx SIP call did not discuss that EPA would treat small cogeneration units as EGUs or differently than under the NSPS and Acid Rain programs. Second, the commenter argued the uniqueness of boiler design, fuel type, and operations of individual industrial boilers makes these units less amenable to achieving the utility standards.

Another commenter expressed concerns that defining "electrical generating units solely on the basis of electrical generating capacity without regards to boiler size is patently unfair to a number of industrial boilers." They explained that "from a practical standpoint, emissions from a 250 mmBTU/hr coal-fired industrial boiler are the same whether it is used to generate electrical power or not." The commenter continued that EPA should treat all industrial boilers alike whether or not they generate electrical power.

Several other commenters expressed concerns that the definition in the trading rule was more inclusive than the definition used for setting forth the control requirements. One commenter suggested specific

language to remedy this concern.

As EPA explained in a clarification notice published on December 24, 1998 (See 63 FR at 71223), EPA used two classification methods to determine whether a unit should be classified as an EGU or a non-EGU. One method (based on whether a unit served a generator from which electricity was sold under a firm contract) applied to units that were in existence in 1995 and were part of the base year emission inventory, and the other method (based on whether a unit serves a generator from which any electricity is sold) applies to units that came into existence on or after January 1, 1996. Both of these methodologies are explained above (in sections II.I.C1 and C.2). In addition, the methodology used to classify units in the base-year inventory was explained in the document, “Development of Modeling Inventory and Budgets for Regional NOx SIP call.” A draft of this document was issued on March 23, 1998 and a final document was issued on September 24, 1998, and is available in the NOx SIP call docket.

The methodology used to classify existing units as EGUs or non-EGUs was based upon whether or not a unit was connected to a generator that produced electricity for sale under firm contract to the grid. Since most industrial units are not currently involved in sales

under firm contract to the grid, this leads to most industrial cogeneration units being classified as non-EGUs. The EPA has several concerns about changing from this methodology to a methodology based upon a one-third potential capacity/25 MWe threshold, as suggested by the commenter. The first is that EPA has not used that threshold in the rulemaking to date, and does not have information on all existing units necessary to apply that threshold to all the units. For example, EPA does not have information to identify all the units that actually cogenerate and the information on how much electricity is sold from these units. The commenter did not even identify the units owned by its members, much less provide that information for identified units.

Second, if EPA did have the information for each unit to determine if the unit's classification should be changed, EPA is concerned that the classification for a number of units would change, apparently none of which are owned or operated by the commenter's members. The commenter noted that changing the definition to be based upon a one-third potential capacity/25 MWe threshold “would not alter the Agency’s baseline emissions inventory.” Since the commenter never identified any existing units where classification is

different in the inventory under the Agency's classification method than under the commenter's classification method, EPA concludes that changing the methodology would not change the inventory classification of any units owned or operated by the commenter's members. The EPA believes that this is because using the criteria of selling under firm contract to the grid classifies most industrial units that generate small amounts of electricity as non-EGUs rather than EGUs.

However, EPA maintains that there is the potential that a number of other units could be reclassified if EPA applied the one-third potential capacity/25 MWe threshold. This could change the classification of a large EGU to a large non-EGU, the classification of a large non-EGU to a large EGU or the classification of a small EGU to a large non-EGU. For example, a unit that is currently classified as a large EGU could become a large non-EGU if, even though the unit was selling electricity under a firm contract, it sold less than one third of its potential electrical output capacity. An independent power producer unit that is connected to a generator greater than 25 MWe and that cogenerates and provides both steam and electricity could fit into this category. A unit that is currently classified as

a large non-EGU could become a large EGU if it did not sell power under a firm contract, but did sell more than one third of its potential electrical output capacity. An industrial boiler that cogenerates and is connected to a generator greater than 25 MWe could fit into this category. A unit that is currently classified as a small EGU and sells under firm contract, but less than one-third of its potential electrical output capacity, could become a large non-EGU if the unit was greater than 250 mmBtu and the generator to which it was connected was less than 25 MWe. An independent power producer unit that cogenerates could fit into this category. In short, the adoption of the commenter's classification methodology could result in reclassification leading to more stringent, rather than less stringent, regulation of some cogeneration facilities

The EPA also does not agree with the commenter's arguments: (1) that deviating from the classification that EPA has used for cogeneration units for 20 years was not a logical outgrowth of the proposed NOx SIP call and that no discussion was included in the proposal that small cogeneration units would be treated as EGUs or differently than under the NSPS and Acid Rain programs; or (2) that the uniqueness of boiler

design, fuel type, and operations of individual industrial boilers makes these units less amenable to achieving the reduction requirements for large EGUs.

In prior regulatory programs, EPA has used the criteria of producing an annual amount of electricity for sale less than one-third of a unit’s potential electrical output capacity or less than 25 MWe. However, these criteria were not applied in the same way in each of these prior programs and recent, ongoing changes in the electric power industry undermine the basis for the criteria, and justify using different criteria for the new units, in today's action. The Agency began using the one-third potential capacity/25MWe cutpoint in 1978, in 40 CFR part 60, subpart Da, setting forth new source performance standards for “electric utility steam generating units.” In that case, the cutpoint was not used to exempt units entirely from NSPS. Rather, it was used to classify them as either “electric utility steam generating units” that would be subject to the new standards under subpart Da or to classify them as non-utility steam generating units that would continue to be subject to the requirements under subpart D and would subsequently become subject to more stringent standards for “Industrial-Commercial-Institutional

Steam generating units" under subpart Db. As the commenter noted, this distinction between utility and non-utility units continued under the Clean Air Act Amendments of 1990, in both title IV and section 112. This cutpoint applied to all steam generating units, not just cogeneration facilities. The cutpoint was used as a proxy for utility vs. non-utility ownership of the units, the assumption being that a unit involved in electricity sales at or below the cutpoint was owned by a company that was in a business other than electric generation and so was a utility.

Since 1990 there have been dramatic changes in the electric power industry associated with the emergence of competitive markets for electricity generation where non-utility generators compete to an increasingly significant extent with traditional utilities. As these changes occur, it becomes less and less appropriate to differentiate between utilities and non-utilities that produce electricity. The Energy Policy Act of 1992 reflected these types of changes in the electric power industry by recognizing a whole new category of non-utility generators, wholesale generators that directly compete with utility generators. The Federal Energy Regulatory Commission's 1996 order adopting open transmission access and the

actions of many States (currently at least 18 States) that are in the process of deregulating electric power generation have further blurred the distinction between utilities and non-utilities. Other federal agencies that deal with the power industry have realized that historical categorizations of the industry are no longer appropriate. For instance, the Energy Information Agency is in the process of streamlining its reporting requirements so that there will no longer be a distinction between reporting by utility generators and by non-utility generators.

In the NOx SIP call rulemaking, that EPA expressed concern that, under a deregulated electricity market, it is important to consider all NOx emissions sources that generate electricity. For instance, in the supplemental notice of proposed rulemaking under the NOx SIP call, EPA explained that:

> Additionally, with deregulation of electric utilities, it is not clear how ownership of the electricity generating facilities will evolve. Therefore, EPA proposes to include all large electricity generating sources, regardless of ownership, in the trading program. As there is no relevant physical or technological difference between utilities and other power generators, the

same monitoring provisions and the size cut-off of greater than 25 MWe are applicable to all units which serve generators. 63 FR at 25923.

With regard to the feasibility of meeting the "utility" standards, the above commenter made several technical arguments about why non-utility units are fundamentally different from utility sources. In particular, the commenter argued that because of the need to vary loads significantly, many industrial boilers cannot operate at the conditions required to obtain maximum NOx reduction using combustion controls. In addition, the commenter argued that pulp and paper mill boilers have technical limitations on the installation of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR), due to wide and rapid load and lower operating temperatures. Furthermore, the commenter does not believe there will be a significant number of allowances available or that the assumption of allowance availability should be used to justify higher costs for industrial sources. Moreover, the commenter argues that some affected States have expressed hesitancy to participate in interstate or even intrastate NOx trading programs.

The EPA continues to believe that industrial cogeneration units can achieve similar NOx emission

reductions as utility units. Post-combustion NOx control technologies, like SNCR and SCR, are available to industrial units that cannot achieve NOx reductions using combustion controls. Both SCR and SNCR are proven technologies demonstrated on industrial and utility units, including paper and pulp industry units. See *White Paper - Selective Catalytic Reduction (SCR) for Controlling NOx Emissions*, ICAC, 1997 and *White Paper - Selective Non-Catalytic Reduction (SNCR) for Controlling NOx Emissions*, ICAC, 1997. At the same time, this rulemaking provides for multiple compliance options including trading of allowances. The Agency believes that a significant number of allowances will be available for trading. The Integrated Planning Model (IPM) analysis shows a significant number of allowances will be available in 2003 when trading begins (see the Regulatory Impact Analysis for further discussion). The compliance supplement pool also provides further allowances in the trading market (see compliance supplement pool discussion in Section III below). In addition, EPA is aware of several States in the process of developing a trading program under the NOx SIP call. Furthermore, a trading program will be promulgated for this section 126 rulemaking.

For all of these reasons, EPA believes that it is appropriate to consider all units that generate electricity for sale as one source category, regardless of whether the owners and operators of the units are traditional utilities, independent power producers, or industrial companies. (Indeed, it may be appropriate at some time in the future to consider all units generating electricity, whether for sale or internal use, as a single category). However, for purposes of this rulemaking, EPA is continuing to apply to existing units the definition of EGU based on firm-contract sales, essentially as clarified in the December 24, 1998 correction notice. This definition does not classify either all existing or new units that generate electricity, or all existing or new units that generate electricity for sale, as EGUs. For example, industrial units that generate electricity only for internal use will be considered non-EGUs. Furthermore, most existing industrial units that sell small amounts of electricity will also not be considered EGUs, because most of these units do not sell electricity under firm contract. Even though EPA is not basing the EGU and non-EGU definitions on the one-third potential capacity/25 MWe threshold supported by the commenters, EPA believes that the definition for existing units

classifies the units of the commenter's members in a way that is consistent with the way the commenters have suggested those units should be classified, i.e., as non-EGUs.

The EGU and non-EGU definitions based on any sales of electricity will apply to units that commence operation on or after January 1, 1999. These definitions will not apply to any of the units referenced by the commenter (e.g., the units referenced, but not identified, in the commenter's April 7, 1999 comments for which the commenter provided information on actual, annual electricity sales). Thus, in general, any new units that serve generators involved in electricity sales will be EGUs. The EPA intends to make parallel clarifications to the definition of EGU under the NOx SIP call rulemaking. The EPA believes that the definition of EGU needs to be consistent across the NOx SIP call, section 126, and FIP rulemakings because it is possible that at one time a source might be subject to control requirements under one of these mechanisms, while at another time a source might be subject to control requirements under another one of these mechanisms. Changing the category that a source has been placed in because of this change in regulatory structure could be confusing and burdensome

for the source.

While EPA is not including all sources that generate electricity for sale or internal use as EGUs at this time, EPA may for all of the reasons explained above, consider whether this would be appropriate in future rulemakings.

4. Final Rule EGU/Non-EGU Classification

In summary under today's final rule, EPA will take a three-step approach to determining which of the following categories a boiler or turbine fit into: large EGU, small EGU, large non-EGU, or small non-EGU. First, EPA will determine the date upon which a unit commenced operation. Second, EPA will determine if a boiler or turbine should be classified into the category of EGU or non-EGU by applying the appropriate criteria depending on the date on which the boiler or turbine commenced operation. Finally, EPA will determine if the boiler or turbine should be classified as large or small.

For units that commenced operation before January 1, 1999, EPA will classify as an EGU any boiler or turbine that sells any electricity to the grid under firm contract. For units that commenced operation on or after January 1, 1999, EPA intends, in general, to classify as an EGU any boiler or turbine that produces

any amount of electricity for sale.

Once EPA determines that a boiler or turbine should be classified as an EGU, EPA then will classify the unit as a small or large EGU. For a unit that commenced operation before January 1, 1999, EPA will consider the unit a small EGU if it serves a generator less than or equal to 25 MWe and a large EGU if it serves a generator greater than 25 MWe. For a unit that commenced operation on or after January 1, 1999 and sells any electricity, EPA will consider the unit a small EGU if it serves a generator that is less than or equal to 25 MWe and that has the potential to use more than 50 percent of the potential electrical output capacity of the unit. Units that serve generators greater than 25 MWe and that sell any electricity will be considered large EGUs.

All other boilers and turbines will be considered non-EGUs. This includes boilers and turbines that commence operation on or after January 1, 1999 connected to generators equal to or less than 25 MWe from which any electricity is sold and that have the potential to use 50 percent or less of the potential electrical output capacity of the boiler or turbine. This also includes any unit that commenced operation before January 1, 1999 that did not produce electricity

for sale under firm contract.

Non-EGUs will be considered large if their maximum rated heat input capacity is greater than 250 mmbtu/hour and will be considered small if their maximum rated heat input capacity is equal to or less than 250 mmbtu/hour.

The EPA intends to address comments related to inconsistencies between this definition and the applicability requirements of part 97, when EPA promulgates part 97 in July.

J. Cost Effectiveness of Emissions Reductions

As described in Section II.A, above, one part of the significant-contribution interpretation that EPA applied in the NOx SIP call rule, and that EPA applies for purposes of today's final rule, is the extent to which "highly cost-effective" NOx control measures are available for the types of stationary sources named in the petitions[27]. As in the NOx SIP call rule (63 FR at 57399) and the proposed section 126 rule (63 FR at 56304), the EPA has selected these highly cost-

[27]As discussed in this section, the highly cost-effective NOx controls happen to apply only to large stationary sources. Under section 126, EPA can make a finding for "any major source or group of stationary sources." In other words, even if not all sources subject to this action were major, they would be part of a group of stationary sources that contribute significantly to nonattainment and hence could potentially be subject to a finding.

effective measures by examining the technological feasibility, administrative feasibility and cost-per-ton-reduced of various multi-state ozone season NOx control measures in light of other actions taken by EPA and States to control NOx.

1. Identifying Highly Cost Effective NOx Controls Levels

The first step in the process of determining cost effectiveness was to identify the types of sources named in the various petitions. The petitioning States have identified the source categories that they believe significantly impact their ability to achieve attainment of the ozone standard. These categories are listed in Table I-1 earlier in this preamble. The EPA has determined that the named source categories can be combined into one general category -- fossil fuel-fired indirect heat exchangers. This term applies to boilers and turbines used for the production of steam, electricity, and in some cases mechanical work, and to process heaters. To assure equity among the various subcategories of such sources and the industries they represent, EPA considered the cost effectiveness of controls for each subcategory separately throughout the affected 20-jurisdiction region described in Section II.B above. The EPA further subdivided the category of

boilers and turbines into two categories, those used to generate electricity for sale and those used for all other purposes. Therefore, the EPA split the population of indirect heat exchangers into the following four subcategories, consistent with the approach EPA took in the final NOx SIP call and the section 126 proposal: (1) boilers and turbines serving generators greater than 25 MWe that produce electricity for sale to the grid ("large EGUs"); (2) boilers and turbines with a heat input greater than 250 mmBtu/hr that exclusively generate steam, produce mechanical work (e.g., provide energy to an industrial pump), or produce electricity for internal use ("large non-EGUs"); (3) process heaters with a heat input greater than 250 mmBtu/hr ("large process heaters"); and (4) smaller indirect heat exchangers, i.e., all such sources not included in the first three subcategories ("small sources").

As mentioned above, in evaluating the cost effectiveness of NOx control levels for indirect heat exchangers, the EPA has taken the same approach as that taken in the final NOx SIP call (see 63 FR at 57399). In short, for each subcategory, the amounts of emissions that cause subcategories in the covered upwind States to contribute significantly to a

petitioning State's nonattainment were determined based on the application of NOx controls that achieve the greatest feasible emissions reduction while still falling within a cost-per-ton-reduced range that EPA considers to be highly cost effective. The NOx control levels for this rulemaking were considered highly cost effective for the purposes of reducing ozone transport to the extent they achieve the greatest feasible emissions reduction but still cost no more than $2,000 per ton of ozone season NOx emissions removed (in 1990 dollars), on average, for each subcategory. The discussion below further describes the basis for this cost amount and the techniques used for each subcategory. The EPA believes that certain control levels that cost more than $2,000 per ton of NOx reduced are reasonably cost effective in reducing ozone transport or in achieving attainment with the ozone NAAQS in specific nonattainment areas. However, EPA is basing the significant-contribution determination only on highly cost-effective reductions. In addition, as discussed further below, in determining whether to assume reductions from the small source subcategory, EPA considered administrative burden.

More specifically, to determine what level of control can be considered highly cost effective, EPA

considered other recently undertaken or planned NOx control measures. Table II-3 provides a reference list of measures that EPA and States have undertaken to reduce NOx and their average annual costs per ton of NOx reduced. Most of these measures fall below $2,000 per ton. The average cost effectiveness of these measures is representative of the average cost effectiveness of the types of controls EPA and States have needed to adopt most recently, since their previous planning efforts have already taken advantage of opportunities for even cheaper controls. The EPA believes that the cost effectiveness of measures that it or States have adopted, or have proposed to adopt, forms a good reference point for determining which of the available additional NOx control measures are among the most cost-effective measures that can be implemented by the sources considered in today's action.

Table II-3. Average Cost Effectiveness of NOx Control Measures Recently Undertaken (1990 $)

Control Measure	Cost Per Ton of NOx Removed
NOx RACT	150 - 1,300
Phase II Reformulated Gasoline	4,100[a]
State Implementation of the Ozone Transport Commission Memorandum of Understanding	950 - 1,600
New Source Performance Standards for Fossil Steam Electric Generation Units	1,290

New Source Performance Standards for Industrial Boilers	1,790

[a] Average cost representing the midpoint of $2,180 to $6,000 per ton. This cost represents the projected additional cost of complying with the Phase II reformulated gasoline NOx standards, beyond the cost of complying with other standards for Phase II RFG.

The EPA notes that there are also a number of less expensive measures recently undertaken by the Agency to reduce NOx emission levels that do not appear in Table II-3. These actions include the title IV NOx reduction program. Though these actions are very cost effective, the Agency is focusing on what other measures exist, at a potentially higher (though still not the highest reasonable) cost effectiveness, that can further reduce NOx emissions. Table II-3 is thereby useful as a reference of the next higher level of NOx reduction cost effectiveness that the Agency considers among the most reasonable to undertake. As a result, the Agency concludes that NOx controls that can feasiblely be achieved and have an average subcategory-specific cost effectiveness less than $2,000 per ton of NOx removed are highly cost effective. The subcategories that EPA intends to control are those major stationary sources in the named categories for which EPA finds that these highly cost-effective controls are available.

2. Determining the Cost Effectiveness of NOx Controls

In an effort to determine what, if any, highly

cost-effective mix of controls is available for each subcategory (i.e., large EGUs, large non-EGUs, large process heaters, and small sources) the Agency considered the average cost effectiveness of alternative levels of controls for each subcategory as described in the final NOx SIP call (see 63 FR at 57400). That analysis is summarized below.

For purposes of this final rule, EPA is using cost-effectiveness numbers developed for the final NOx SIP call. When EPA finalizes its source-specific inventory data (as discussed in section I above), EPA will revise the cost estimates for this action in conjunction with promulgation of the trading portion of this section 126 rulemaking. The EPA does not anticipate that the revised cost-effectiveness numbers will be significantly different from those in today's action. This is due to the fact that unit-specific changes on the inventory should be minimal. For example, EGU units should not change significantly because the information used for NOx SIP call inventory was based on CEM data. For non-EGUs, EPA anticipates a small decrease in the number of affected sources as units move from the large to small category. In addition, EPA concludes that the cost of controls and reductions achievable do not vary significantly across

the region and removing the three States that are in the NOx SIP call, but not in today's section 126 action, should not impact the regionwide average cost effectiveness. This is due to the fact that cost-effectiveness numbers assume trading among sources. Therefore, today's rule will use the cost-effectiveness numbers developed for the NOx SIP call.

As part of today's action, the Agency is describing the interim final emission limitations that will be imposed in the event that a section 126 finding is made and the Agency does not promulgate the Federal NOx Budget Trading Program before such finding (see Section IV.D below for further discussion). The EPA notes that the cost-effectiveness analysis summarized below applies to the Federal NOx Budget Trading Program and not the interim final emission limitations. EPA is committed to establishing final allocations and trading program provisions by July 15, 1999, well before the date that sources need to comply with this action (May 1 ,2003), and thus, the cost-effectiveness analysis presented is appropriate for today's rulemaking.

The average cost effectiveness of the controls was calculated from a baseline level that included all currently applicable Federal or State NOx control measures for each subcategory. The baseline did not

include Phase II and Phase III of the OTC NOx MOU since those measures are not Federally required and they have not yet been adopted by all the involved States[28]; if the OTC NOx MOU were included in the baseline, the overall costs would be lower. In determining the cost of NOx reductions from large EGUs, EPA assumed a multi-state cap-and-trade program. As discussed in the final NOx SIP call (see 63 FR at 57400), EPA evaluated and compared the likely air quality impacts both with and without a multi-state NOx cap-and-trade program for electricity generating sources. This analysis showed that a multi-state trading program causes no significant adverse air quality impacts. Because such a program would result in significant cost savings, EPA's cost-effectiveness determination for large EGUs (i.e., the majority of the core group of sources in the trading program) assumes sources will participate in a multi-state trading program[29]. For non-EGU sources, EPA used a least-cost method which is equivalent to an

[28]In the Regulatory Impact Analysis of the final NOx SIP call, EPA evaluates an additional option of the economic impact of including the Phase II and III OTC NOx MOU in the baseline for the electric power industry.

[29]Large EGUs in States covered by (1) the NOx Budget Trading program under the section 110 NOx SIP call, (2) the section 110 FIP, or (3) section 126, will be able to trade among each other.

assumption of an intrastate trading program. Under this method, the least costly controls, in terms of total annual cost per ozone season ton removed, across the entire set of possible source-control measure combinations are selected in order until the required NOx emission budget is achieved. Inclusion of non-EGU sources in a multi-state trading program would provide further cost savings.

Table II-4 summarizes the control options investigated for each subcategory covered by the petitions and the resulting average, multi-state cost effectiveness as presented in EPA's final NOx SIP call (see 63 FR at 57401). Additionally, the cost effectiveness analysis included a consideration of each subcategory's growth, including new sources. Thus, the control levels arrived at are also cost-effective for new sources.

Table II-4. Average Cost Effectiveness of Options Analyzed[a]
(1990 dollars in 2007)

Source Category	Average Cost Effectiveness ($/ozone season ton) for each Control Option		
Large EGUs	0.20 lb/mmBtu	0.15 lb/mmBtu	0.12 lb/mmBtu
	$1,263	$1,468	$1,760
Large Non-EGUs	50% reduction	60% reduction	70% reduction

	$1,235	$1,467	$2,140
Process Heaters[b]	$3,000/ton maximum per source	$4,000/ton maximum per source	$5,000/ton maximum per source
	$2,860	$2,896	$2,896

[a]The cost-effectiveness values in Table II-4 are regionwide averages. The cost-effectiveness values represent reductions beyond those required by title IV or title I RACT, where applicable.

[b]For process heaters, the table indicates that the same control technology (at the same cost) would be selected whether the cost ceiling for each source is $3,000, $4,000, or $5,000 per ton; thus the average cost-effectiveness number for this source category is the same in each column.

The following discussion explains the control levels determined by EPA to be highly cost effective for each subcategory.

a. Large EGUs

As proposed (63 FR at 56306), for large EGUs, the control level was determined by applying a uniform NOx emissions rate across the 23 jurisdictions of the NOx SIP call which includes the jurisdictions potentially subject to section 126 findings. The cost effectiveness for each control level was determined using the IPM. Details regarding the methodologies used can be found in the Regulatory Impact Analysis. Table II-4 summarizes the control levels and resulting cost effectiveness of three levels analyzed.

A regionwide level of 0.20 lb/mmBtu was rejected because, though it resulted in an average cost effectiveness of less than $2,000 per ton, the air

quality benefits were less than those for the 0.15 lb/mmBtu level, which was also less than $2,000 per ton.

Some commenters supported a control level based on 0.12 lb/mmBtu. The EPA estimates that a control level based on 0.12 lb/mmBtu has a cost effectiveness of $1,760 per ozone season ton removed, which is within the upper range of cost effectiveness. This estimate is based on the Agency's best estimates of several key assumptions on the performance of pollution control technologies and electricity generation requirements in the future. While the record strongly supports EPA's determination that a 0.15 lb/mmBtu trading program beginning in 2003 will not lead to installation of SCR technology at a level and in a manner that will be difficult to implement or that will result in reliability problems for electric power generation, the record is not as clear with regard to a trading program based on a 0.12 lb/mmBtu level (see Section II.K below for discussion of reliability and section III.C for discussion of compliance date). Although 0.12 lb/mmBtu is technically achievable, the record had data from only one boiler achieving that level, Birchwood Unit I in Virginia. (See *Performance of Selective Catalytic Reduction on Coal-Fired Steam Generating Units*, EPA,

June 25, 1997.)

With a strong need to implement a program by 2003 that is recognized by the States as practical, necessary, and highly cost effective, the Agency has decided to base the emissions budgets for EGUs on a 0.15 lb/mmBtu trading level of control. This control level has an average cost effectiveness of $1,468 per ozone season ton removed[30]. This amount is consistent with the range for cost effectiveness that EPA has derived from recently adopted (or proposed to be adopted) control measures.

b. Large Non-EGUs

As proposed (63 FR at 56306), EPA determined a highly cost-effective control level for large non-EGUs by applying a uniform percent reduction in increments of 10 percent. Details regarding the methodologies used are in the Regulatory Impact Analysis. Table II-4 summarizes the control levels and resulting cost effectiveness for non-EGUs.

For large non-EGUs, the cost-effectiveness

[30]It should be noted that in the final NOx SIP call, EPA also investigated the regionwide cost effectiveness of NOx reductions if each State individually met the budget component for large electricity generating boilers and turbines (i.e., through intra-State trading). In the case of the 0.15 lb/mmBtu strategy, intra-State trading resulted in a regionwide cost effectiveness of $1,499/ton compared to $1,468/ton for regionwide trading.

determination includes estimates of the additional emissions monitoring costs that sources would incur in order to participate in a trading program. Some non-EGUs already monitor their emissions. These costs are defined in terms of dollars per ton of NOx removed so that they can be combined with the cost-effectiveness figures related to control costs. Monitoring costs for large non-EGU boilers and turbines are about $160 per ton of NOx removed.

Based on this information, the EPA determines that for large non-EGUs, a control level corresponding to 60 percent reduction from baseline levels is highly cost effective (this percent reduction corresponds to a regionwide average control level of about 0.17 lb/mmBtu).

c. Large Process Heaters

For large process heaters, the control level was determined by applying various cost-effectiveness thresholds, because trading was not assumed to be readily available for this subcategory. Details regarding the methodologies used are in the Regulatory Impact Analysis. Table II-4 summarizes the control levels and resulting cost effectiveness for each option under this subcategory.

At proposal (see 63 FR at 56306), EPA determined

that controlling process heaters, though reasonably cost effective, is not highly cost effective because all the options analyzed for these source categories cost more than $2,000 per ton of NOx removed. Thus, EPA concluded that these sources do not emit in amounts that significantly contribute to petitioning States' nonattainment or maintenance problems.

One commenter objected to EPA's proposed denial of section 126 petition with respect to large process heaters. The commenter argued that implementation of the regional NOx budget program adopted by the OTC indicates that a trading program is readily available for such sources within the OTC. If such a program is available in the OTC, the commenter questions why such a program is not being imposed on sources under section 126.

Although a trading program is available for process heaters under the OTC, EPA has determined that controlling process heaters across the entire region covered by section 126 is not highly cost effective. If EPA were to include monitoring costs in its cost-effectiveness number and assume that a trading program would achieve a 30 percent reduction in the cost-effectiveness number, controlling process heaters would still cost more than $2,000 per ton of NOx removed.

Thus, for today's final rule, EPA concludes that process heaters do not emit in amounts that significantly contribute to petitioning States' nonattainment or maintenance problems.

d. Small Sources

At proposal (see 63 FR at 56306), for the subcategory of small sources, EPA has determined that additional control measures or levels of control are not highly cost effective and appropriate to mandate. For the purposes of this rulemaking, EPA generally considers the following sizes of point sources to be small: (1) electricity generating boilers and turbines serving generators 25 MWe or less, and (2) other indirect heat exchangers with a heat input of 250 mmBtu/hr or less (see section I above for further discussion).

One commenter objected to EPA's denial of section 126 petitions with respect to EGUs between 15 and 25 MWe. The commenter advocated capping such sources at 1990 levels consistent with the OTC NOx MOU. The commenter argued that this action would not require additional controls in a market driven NOx control program.

In the NOx SIP call (see 63 FR at 57402), EPA found that the collective emissions from small sources

were relatively small (in the context of that rulemaking) and the administrative burden, to the permitting authority and to regulated entities, of controlling such sources was likely to be considerable. Even if EPA were not to apply additional controls beyond capping small sources at 1990 levels, there would be administrative costs that would be considerable in comparison to the emissions reductions gained. Thus, this level of control is not highly cost effective and appropriate to mandate. Furthermore, EPA notes that the 25 MWe is approximately equivalent to 250 mmBtu/hr used for small non-EGUs.

In today's action, for the same reasons as described in the final NOx SIP call, EPA concludes that small sources do not emit in amounts that significantly contribute to petitioning States' nonattainment or maintenance problems.

e. Summary of Control Measures

Table II-5 summarizes the controls that are assumed for each subcategory.

Table II-5. Summary of Feasible, Highly Cost-Effective NOx Control Measures

Subcategory	Control Measures
Large EGUs	State-by-State ozone season emissions level (in tons) based on applying a NOx emission rate of 0.15 lb/mmBtu on all applicable sources assuming historic ozone season heat input and adjusting for growth to year 2007

Large Non-EGUs	State-by-State ozone season emissions level (in tons) based on applying a 60 percent reduction from uncontrolled emissions on all applicable sources assuming uncontrolled ozone season emissions and adjusting for growth to year 2007
Large Process Heaters	No additional controls highly cost effective
Small Sources	No additional controls highly cost effective

K. Feasibility of NOx Control Implementation Date

Some commenters asserted that a compliance deadline of May 2003 is infeasible for completing the installation of the assumed NOx controls. Some commenters argued that there are not enough materials and suppliers to install NOx controls by the May 2003 deadline. Other commenters expressed concern that utilities will not have sufficient time to install NOx controls without causing electrical power outages; these commenters stated that such power outages would have adverse impacts on the reliability of the electricity supply. Commenters also expressed concern about the technologies EPA assumed could be used to meet the 2003 deadline and the cost assumptions for NOx control technology.

As part of the NOx SIP call, the Agency conducted a detailed examination of the feasibility of installing the NOx controls that EPA assumed in developing the emissions budgets for the affected States. See

Feasibility of Installing NOx Control Technologies By May 2003, EPA, Office of Atmospheric Programs, September 1998. The Agency's findings are summarized in the NOx SIP call final rule (63 FR at 57447). Based on these findings, EPA believes that the compliance date of May 1, 2003 for NOx controls to be installed to comply with this section 126 rulemaking is a feasible and reasonable deadline.

Furthermore, several utility plants have already begun installation of SCR retrofits, indicating the ability of electric utilities to meet the compliance date for the NOx SIP call without system reliability concerns. These projects are summarized in Table II-6 below. For instance, the Tennessee Valley Authority (TVA) has publicly announced its schedule to have all its units comply with the NOx SIP call by 2003. This is quite significant, since TVA operates more than 7 percent of the coal-fired capacity in the NOx SIP call Region.

Table II-6. Planned SCR Retrofit Projects

Utility	Plant	Unit Size (MW)	Fuel	Outage Date
TVA	Allen 1	300	Coal	Spring 2001
	Allen 2	300	Coal	Spring 2002
	Allen 3	300	Coal	Fall 2001
	Bull Run	900	Coal	Spring 2003

	Cumberland 1	1300	Coal	Spring 2003
	Cumberland 2	1300	Coal	Fall 2002
	Paradise 1	700	Coal	Fall 2000
	Paradise 2	700	Coal	Spring/Fall 1999
	Widows Creek 2	141	Coal	Spring 2003
	Widows Creek 7	575	Coal	Spring 2002
AES	Kintigh	655	Coal	Before 2003
Associated Electric Cooperative	New Madrid 1	600	Coal	Before 2003
	New Madrid 2	600	Coal	Fall 1999
Edison Mission Energy	Homer City 1	660	Coal	Before 2003
	Homer City 2	660	Coal	Before 2003
	Homer City 3	692	Coal	Before 2003

In addition, one commenter agrees that the controls are feasible in terms of their supply, the time available for the needed installation and the availability of vendors to effectively install them. The commenter has assessed the feasibility of NOx SIP call compliance by the affected sources in the context of electric system reliability, as explained in a report *Electric System Reliability - A Red Herring to Delay Clean Air Progress*, Ozone Attainment Coalition, September 1998. This report shows that, even with conservative assumptions about outage periods for the installation of SCR controls, compliance with the SIP call can be achieved in aggregate by the affected sources. Furthermore, the commenter has completed

additional analysis that concludes that SIP call compliance is a manageable situation that will be accomplished during the non-peak periods of electricity demand. The analysis estimates that SCR can be installed on 255 electric utility units as compared to EPA's estimate of 142 units (see *Electric System Reliability and the NOx SIP Call*, Ozone Attainment Coalition, Draft Report, April 1999).

The Agency is also providing compliance flexibility to sources for the 2003 and 2004 ozone seasons by establishing State compliance supplement pools. (See section IV.C.1.c for further discussion of compliance supplement pool.)

The EPA also concludes from the German experience that reliability should not be a problem. In the mid-1980s, West Germany required every plant to meet a NOx emission rate of about 0.16 lb/mmBtu, every half-hour all year long. Within a 3-year period, West Germany retrofitted more than 80 percent of its coal-fired power plants with SCR. The retrofitted, coal-fired plants represented about 33 percent of the overall generation capacity of Germany, compared to 27 percent of the U.S. in the final NOx SIP call (under section 126 this percentage will be less since the rule covers three less States). During this time, no brownouts are

known to have occurred as a result of the SCR retrofits, even though West German plants tend to have more space restrictions than U.S. plants and it was much more difficult for West Germany to import power from other countries.

1. Cost assumptions for SCR.

One commenter has argued that the costs for installation of SCR are 50 percent greater than EPA's estimate and that SCR does not achieve NOx removal greater than 83 percent. The commenter did not provide the basis for its estimates.

The EPA maintains that SCR systems are achieving 90 percent or greater NOx removal in applications demonstrated worldwide. The SCR is a proven technology used to significantly reduce NOx emissions from more than 300 sources in the U.S., and more than 500 sources worldwide. By proper catalyst selection and system design, NOx removal efficiencies exceeding 90 percent can be achieved. In practice, commercial SCR systems often meet control targets of over 90 percent. For further discussion see *White Paper - Selective Catalytic Reduction (SCR) for Controlling NOx Emissions*, ICAC, 1997.

The SCR control assumptions used by EPA are

supported by actual SCR applications. The Northeast States for Coordinated Air Use Management (NESCAUM) and the Mid-Atlantic Regional Air Management Association (MARAMA) prepared a comprehensive report on the status of technologies to reduce emissions of NOx from electric utility boilers. The report relied on real-world cost and operating experience from actual installations of advanced NOx control technologies (including SCR) at fourteen U.S. facilities involving 52 coal and gas/oil-fired boilers. The report results demonstrate that available technologies can achieve significant NOx emissions reductions both cost effectively and reliably. The report states that NOx emission rates of 0.15 and as low as 0.08 lb/mmBtu were achieved at a cost of $400 to about $1500/ton. (See *Status Report on NOx Control Technologies and Cost Effectiveness for Utility Boilers*, Staudt, James E., NESCAUM/MARAMA Report, June 1988.) Note that capital costs reported are comparable to EPA capital costs which were given at $50-70/kW (in 1997 dollars). (See *Analyzing Electric Power Generation Under the CAAA*, EPA, March 1998.)

The EPA used the information available from the existing retrofit at Merrimack Unit 2 to corroborate its costing methodology. For this 330 MW cyclone-fired

installation, designed for a 65 percent NOx removal efficiency, the total capital cost was reported to be $55/kW and cost effectiveness was $400/ton of NOx removed (see NESCAUM/MARAMA Report, June 1988). This cost included the addition of a significant amount of additional ductwork and support steel required for this retrofit because of unusual space limitations. The baseline NOx emission rate for this unit was also unusually high (2.66 lb/mmBtu), thus requiring a relatively large and expensive ammonia handling system. The capital cost estimate for the Merrimack Unit 2 retrofit using EPA's cost model was $68.53/kW, which was over 20 percent higher than the $55/kW actual cost reported. Thus, this comparison confirms the conservatism of the EPA's cost methodology and contingencies built into it.

2. Technology Deployment

Commenters maintained that EPA has overestimated the amount of SCNR that will be installed as a result of the section 126 action. First, commenters argued that SNCR NOx removal is between 15 and 35 percent, as opposed to EPA's estimate of 40 percent. Second, commenters disagreed with EPA's assertion that there are no limits to the unit capacity for commercial application of SNCR. Commenters maintained that SNCR

is limited to units with capacities no higher than 325 MW.

The EPA maintains that SNCR NOx reduction of 40 percent is attainable and represents the mid-range efficiency achieved in current utility boiler applications. The SNCR has been commercially used on electric utility boilers to achieve in excess of 60 percent NOx reduction while maintaining ammonia slip below 10 ppm. (See NESCAUM and MARAMA, June 1998, Attachment C, p. 42.) Although this performance may not be possible for every boiler, careful assessment of factors impacting boiler performance (such as initial NOx level, furnace temperature, flue gas flow and NOx distribution profiles at various operating load conditions, and access for injection of reagent) can result in increased NOx reduction efficiency and reduced ammonia slip from SNCR systems. Reported literature indicates that SNCR control efficiency on the installed utility boilers ranges predominantly from 30 to 60 percent. (See *White Paper - Selective Non-Catalytic Reduction (SNCR) for Controlling NOx Emissions*, ICAC, 1997, p. 18.) Based on the demonstrated experience in the electric utility and other industry, EPA has suggested use of SNCR as a

cost-effective option to achieve desired emissions reductions. The EPA does not require use of SNCR and acknowledges that some of the affected facilities may choose to install SCR instead of SNCR and reduce emissions over and above what is required by the NOx SIP call, as part of their compliance and economic strategies.

The EPA also maintains that there are no limits to the unit capacity for commercial application of SNCR. The size of the boiler does not limit the ability to inject SNCR reagent into the combustion gas flow to achieve NOx reductions, as demonstrated by applications worldwide. The SNCR is a fully commercial NOx reduction technology, with application of ammonia and urea-based processes at approximately 300 installations worldwide, ranging up to 822 MW in size and covering a wide array of stationary combustion units firing a variety of fuels. (See *White Paper - Selective Non-Catalytic Reduction (SNCR) for Controlling NOx Emissions*, ICAC, 1997, pp. 17-26.) Industrial boilers, process units, and municipal combustors make up the largest share of commercial SNCR installations in the U.S. This distribution appears to be a result of NOx control regulations in place rather than SNCR's technical limitations. In the U.S., the largest urea-

based SNCR has been commercially applied to a 320 MWe pulverized coal-fueled, wall-fired electric utility boiler. However, there are various commercial urea-based SNCR contracts in place for larger units (e.g., one unit is as large as 620 MWe). (See NESCAUM/MARAMA Report, June 1998, Attachment C, p. 44.) Additionally, literature shows that one technology vendor has conducted a computer simulation of SNCR application on some large size boilers and is extending commercial performance guarantees for the same. (See *CFD Modeling of Urea-Based SNCR and Hybrid Performance on Large Utility Boilers*, Comparato, J.; Boyle, J.; and Michaels, W., ICAC Forum 1998, pp. 1-8.) Based on this information, it is reasonable to conclude that commercially available SNCR technology can be applied to large boilers, and therefore, costs for utility NOx reductions have not been underestimated.

To further address concerns on the potential size limitations for SNCR raised by the commenters, EPA conducted a sensitivity analysis using the IPM as part of the final NOx SIP call. In this analysis, SNCR was applied to boilers 200 MWe or smaller only. This is a conservative assumption considering application of SNCR on a boiler as large as 320 MW has already been demonstrated. Additionally, it was assumed that SNCR

NOx reduction efficiency would be 35 percent for sources which emit NOx (prior to the application of SNCR) at levels of equal to or more than 0.5 lb/mmBtu. The SNCR efficiency was assumed to be limited to 30 percent for sources which emit NOx (prior to the application of SNCR) at levels less than 0.5 lb/mmBtu (i.e., low-emitting sources).

Results of the IPM sensitivity simulation, showed less of SNCR and more of SCR is needed to achieve the required NOx budget contributions. Specifically, there is a decrease of 33.3 gigawatts (GW) of SNCR on coal-fired units and an increase of 24.7 GW of SCR installation on coal-fired units. Cost of compliance for EGUs under the sensitivity scenario are estimated to be about $1746 (1990 dollars) per ton of NOx removed in 2007. Thus, even with reduced use and effectiveness of SNCR, it is highly cost effective for EGUs to comply with the section 126 requirements.

In addition to the cost of compliance, EPA examined the feasibility of implementing the retrofits by September 2002 for the sensitivity scenario. The IPM projections revealed that, in general, one to three SCR or SNCR installations per plant would be expected. However, at one plant a maximum of six SCR systems may be required. Based on these projections and EPA’s

analysis of control technology retrofitting schedules, it is reasonable to conclude that all of the necessary engineering and air permitting activities can be accomplished by September 2002.

Based on the above discussion, limiting SNCR applicability and NOx control efficiency would not affect the feasibility of implementing the controls by May 2003. Moreover, compliance with the section 126 requirements would still be cost effective.

3. Catalyst supply.

One commenter has argued that EPA's estimates on the availability of SCR catalyst are flawed because the Agency is underestimating the number of EGUs that will be employing SCR technology.

The EPA has determined that ample supply of catalyst exists. One major catalyst vendor has recently announced its plans to build a new catalyst manufacturing plant by mid-year 2000, thus increasing the current supply of available catalyst. In addition, a study of catalyst availability during the NOx SIP call had concluded that adequate capacity of SCR catalyst supply is believed to be available to satisfy the demand that may result from the projected SCR installations. (See *Feasibility of Installing NOx Control Technologies by May 2003*, EPA, September 1998.)

In addition, as discussed above, EPA conducted a sensitivity analysis limiting SNCR applicability and assuming a lower SNCR NOx reduction efficiency. Even with the increase in projected SCR capacity under the sensitivity scenario, the excess capacity in catalyst supply would be sufficient to meet the demand over an implementation period of less than 3 years. Given the findings of the sensitivity analysis and the plans for building an additional catalyst plant, EPA infers there will be sufficient catalyst supply for increased SCR installations.

4. Outage Periods

One commenter has submitted information reflecting that SCR retrofits expected to result from the final rule could be placed in three categories: cases with modest retrofit difficulty, cases with intermediate retrofit difficulty, and cases with challenging retrofit difficulty. The commenter suggested that a modestly difficult retrofit will require about 4-6 weeks of outage for completing SCR installation; a retrofit with intermediate difficulty will need 8-12 weeks; and a challenging retrofit will need more than 14 weeks of outage.

The EPA has examined the information submitted by the commenter and determined that this information is

unsupported and speculative. The commenter asserts that the length of the outage periods to install SCR will vary, depending upon the size of the affected units and the degree of access. According to the commenter, small units with reasonable access will be modestly difficult retrofits. The commenter fails to show a logical connection between the size of a unit and the degree of retrofit difficulty in the case of an SCR installation, where the emission controls are in a separate structure adjacent to the unit itself. In EPA's view, a large unit with relatively unconstrained plant layout may be easier to retrofit compared to a small unit with a relatively constrained layout.

The commenter provides an example of a hypothetical "intermediate retrofit difficulty case" in which access to the unit is constrained. In this example, the commenter lists the activities to be completed and the volume of material needed but does not provide any data relating these activities to the time needed to complete them. In the absence of this data, the commenter's claimed outage period for the example is unsupported. However, EPA notes that in any construction project (such as SCR retrofit), multiple activities can be conducted concurrently and, if needed, more personnel can be deployed to expedite the

project. Therefore, even assuming, for the sake of argument, the commenter's categorization of retrofit difficulty has some merit, the relationship of this categorization to outage requirement is unsupported. The commenter's assertion that the vast majority of SCR retrofits will be of intermediate retrofit difficulty also is unsupported.

The EPA also notes that a large utility in Germany, which also supplies SCR systems, completed each of its SCR retrofits in about 4 weeks. This utility also has informed EPA that SCR retrofit-related work can be spread over two or three outages. (See *Feasibility of Installing NOx Control Technologies By May 2003*, September 1998.) By spreading retrofit work over a few outages, if necessary, plants would be able to avoid causing any impacts on the reliability of electricity supply.

The EPA used IPM to look into the sensitivity of a number of the model's assumptions, as discussed in *Feasibility of Installing NOx Control Technologies by May 2003.* One of the sensitivity runs considered the installation of 63 GW in 1 year and an increase of the planned outage period to 9 weeks. This run can also be considered a representation of the installation of 189

GW of SCR at coal-fired units over a 3-year period (more than the commenter assumes will occur) with 9 weeks of planned outages each year (10 percent less than what the commenter assumes will occur on average). In this sensitivity scenario, increasing the amount of planned outage did not threaten the stability of the power supply (deduced from the fact that no new units were built in IPM simulations). What does occur is some shifting of power between regions in and around the SIP call region, decisions for later existing unit retirement, and increased use of gas-fired units and an overall result of some increased cost of electricity production, but no conditions that would necessitate a blackout. The total costs over 3 years amount to a small increase of about 1.3 percent in overall costs. The increase in costs were found to be related to the need to substitute available, idle power plants for those units taken off line, which are more expensive to run.

L. Air Quality Assessment

In the proposal, EPA relied on air quality modeling in the final NOx SIP call to evaluate the ozone benefits in the petitioning States of NOx controls proposed in today's action. That modeling was performed for the 23 jurisdictions covered in the NOx

SIP call to confirm that those States collectively contribute significantly to downwind nonattainment. The collective contribution of all the upwind States is one factor that went into EPA's decision that each individual upwind State contributes significantly to downwind nonattainment. The results of this modeling indicate that the NOx controls applied to the sources in the upwind States which make a significant contribution to nonattainment in one or more of the petitioning States will provide substantial ozone benefits in each of the petitioning States. As discussed below, the EPA continues to believe that the results of that modeling analysis are valid for the purpose of today's rulemaking, as well.

The modeling cited at proposal was based on UAM-V model runs for a 2007 Base Case and a control scenario designed to evaluate the effects of NOx controls very similar to those in today's rulemaking on nonattainment in downwind States, including each of the petitioning States. The details of this modeling are described in the final NOx SIP call rulemaking. Several commenters stated that this modeling does not isolate the effects on ozone in the petitioning States of controls applied outside the Northeast. As part of the NOx SIP call rulemaking, EPA performed model runs which provide the

type of assessment similar to that requested by the commenters. This modeling included a comparison of two control scenarios. One scenario is identified above as having NOx controls applied across all 23 jurisdictions. The other scenario included the application of these same NOx controls in the Northeast only. The difference in ozone predictions between these two scenarios shows the effects in the Northeast of NOx controls applied outside this region. A full description of this modeling and the metrics used to evaluate the results are described in the final NOx SIP call rulemaking.

The results indicate that controls similar to those in today's rulemaking will produce large reductions in ozone concentrations in the petitioning States. For example, the number of modeled exceedences of the 1-hour NAAQS that are reduced by upwind controls include a 16 percent reduction in New York City, a 38 percent reduction in Philadelphia, and 43 percent reduction in western Massachusetts. Also, for the 8-hour NAAQS, the number of exceedences reduced by upwind controls is 7 percent in New York, 10 percent in Massachusetts, and 32 percent in Pennsylvania. Thus, the results of this modeling indicate that the proposed NOx controls applied to the sources in the upwind

States proposed as making a significant contribution to nonattainment in one or more of the petitioning States will provide substantial ozone benefits downwind in the petitioning States.

The EPA recognizes that the amount of emissions reduction in the modeled strategy is not identical to the amount of emissions reduction in today's rulemaking. There are three additional upwind States (i.e., Georgia, South Carolina, and Wisconsin) which are controlled in the modeled strategy that are not covered by today's rulemaking. The difference in the total NOx emission reductions for the 20 jurisdictions covered by today's rule between what was assumed in the 23 jurisdiction modeling is 11 percent. These three States were covered in the NOx SIP call because of their contributions to States other than the petitioning States. Since EPA believes that emissions from sources in these States do not contribute significantly to nonattainment in any of the petitioning States, it is reasonable to assume that emissions reductions in these States will not have any appreciable impact on nonattainment in any of the petitioning States.

III. EPA's Final Action on Granting or Denying the Petitions

The EPA is taking final action on the section 126 petitions based on the outcome of the multi-step process described in the preceding section. The EPA's action consists of three components: 1) technical determinations of whether upwind sources or source categories named in each of the petitions significantly contribute to nonattainment (of the 1-hour or 8-hour standard) or interfere with maintenance (of the 8-hour standard) in the relevant petitioning State; 2) for those sources or source categories for which EPA is making an affirmative technical determination, action specifying when a finding that those sources emit or would emit in violation of the section 110(a)(2)(D)(i)(I) prohibition will be deemed made or not made (or made but subsequently withdrawn) if certain events occur for purposes of section 126(b); and 3) the specific emissions-reduction requirements that will apply when such a finding is deemed made. Each of these actions is described below. Under this final action, new and existing large EGUs and large non-EGUs in 19 upwind States and the District of Columbia are potentially subject to a future section 126(b) finding and therefore to the requirements set forth in this final rule.

A. Technical Determinations

First, EPA is making final affirmative technical determinations as to which of the new (or modified[31]) or existing major sources or groups of stationary sources named in each petition emit or would emit NOx in amounts that contribute significantly to nonattainment of the 1-hour or 8-hour standard in (or interfere with maintenance of the 8-hour standard by) each petitioning State. The regulatory text of today's rule sets forth each of the affirmative technical determinations for sources named in each petition.

In short, for each petition, with respect to each ozone standard (as specifically requested in the petition), EPA is making affirmative technical determinations of significant contribution (or interference) for those large EGU and large non-EGU sources for which highly cost-effective controls are available (as described in Section II.J.), to the extent those sources are located in one of the "Named Upwind States" corresponding to that petition in Tables II-1 and II-2. Thus, to illustrate, for the petition from New York, EPA is making an affirmative technical determination that large EGUs and large non-EGUs that

[31]Whenever the word "new" is used in relation to sources affected by this rule, it includes both new and modified sources.

are located or would be located in the named portions of Delaware, the District of Columbia, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Virginia, and West Virginia emit, or would emit, NOx in amounts that contribute significantly to nonattainment of the 1-hour standard in the State of New York. (By contrast, EPA is determining that such sources located in Tennessee, which New York also named in its petition, do not emit NOx in amounts that significantly contribute to nonattainment problems in the State of New York.) The result is that EPA is determining that the large EGUs and large non-EGUs in at least some upwind States named in every petition except Vermont's and Rhode Island's contribute significantly to nonattainment of at least one of the standards (or interfere with maintenance of the 8-hour standard) in the petitioning State. The EPA refers the reader to the regulatory text for a full description of the final affirmative technical determinations for each petition.

The EPA notes that the Agency is not making final affirmative technical determinations as to any sources located in Arkansas, Iowa, Louisiana, Maine, Minnesota, Mississippi, New Hampshire, and Vermont. For the States of Maine, New Hampshire, and Vermont EPA has not

completed sufficient modeling and other assessments to enable the Agency to conclude that sources in any of those States contribute significantly to nonattainment (or interfere with maintenance) of an ozone standard in any downwind petitioning State.[32] In the final NOx SIP call, EPA stated that it planned to conduct State-by-State modeling for these and certain other States for which EPA does not currently have adequate information. The EPA indicated it intended to begin the modeling in the fall of 1998. However, in letters dated March 10, 1999, EPA notified these States that, given the Agency's current resource contraints, it would not be able to conduct the additional air quality modeling at this time. Accordingly, for the present, EPA is denying, on the grounds of inadequate information, the portions of the petitions from Maine, New Hampshire, and Pennsylvania that request a finding of significant contribution with regard to sources located in any of these three States.

The EPA is also not making any affirmative technical determinations regarding sources located in Georgia, South Carolina, Wisconsin, Minnesota,

[32]Maine's petition named sources in Vermont and New Hampshire; New Hampshire's petition named sources in Maine, Vermont, and Iowa; and Pennsylvania's petition named sources in Arkansas, Iowa, Louisiana, Minnesota, and Mississippi.

Mississippi, Louisiana, Arkansas, and Iowa. For these States, EPA has sufficient modeling results (and other technical assessments) to enable it to conclude that these States do not significantly contribute to downwind nonattainment or maintenance problems in any of the petitioning States.[33] Although,

[33]As part of EPA's evaluation of contributions, two screening criteria were used to identify those linkages that were definitely not significant (i.e., a 4-episode average contribution < 1 percent or a maximum contribution < 2ppb). A linkage is considered insignificant if at least one of the two screening criteria is not met. The results of the CAMx modeling are described in the Air Quality Modeling Technical Support Document for the NOx SIP Call. The CAMx modeling indicates that the 1-hour and 8-hour contributions from Iowa to both New Hampshire and Pennsylvania are below the 1 percent screening criteria for the 4-episode average contribution metric. Also, the CAMx modeling for Louisiana and Mississippi and the multi-state group containing Arkansas and Minnesota indicates that contributions from these States to 1-hour nonattainment in Pennsylvania are below the 1 percent screening criteria. Given that EPA's significant contribution test requires that an upwind area be determined to significantly contribute based on both the CAMx and UAM-V models, the fact that these States do not significantly contribute based on CAMx modeling means that they could not be found to significantly contribute even if they are found to be significant under the UAM-V modeling. Thus, even though EPA has not conducted State-specific UAM-V zero-out modeling for each of these States, the 1-hour and 8-hour linkages from Iowa to New Hampshire and Pennsylvania and the 1-hour linkages from Arkansas, Louisiana, Minnesota, and Mississippi to Pennsylvania are not significant because these linkages do not pass the screening criteria for the CAMx 4-episode average contribution metric. Note that the contributions from Louisiana, Mississippi, and the multi-state grouping containing Arkansas and Minnesota to 8-hour nonattainment in Pennsylvania exceed the screening criteria. Thus, we are not making affirmative technical findings on these States under the 8-hour standard because, without the State-by-State UAM-V zero-out modeling, EPA does not have sufficient information to determine whether they contribute

EPA does not believe that sources in Georgia, South Carolina, and Wisconsin are significantly contributing to nonattainment problems in any of the petitioning States, EPA notes that it has determined in the NOx SIP call rule that sources in these States are significantly contributing to other States in the eastern half of the nation.

B. Action on Whether to Grant or Deny Each Petition

1. Portions of Petitions for Which EPA Is Making an Affirmative Technical Determination

For the reasons described in Section II.E., EPA is issuing the alternative type of final action provided for in the consent decree. Under that alternative approach, for sources for which EPA is today making an affirmative technical determination of significant contribution, the section 126(b) finding that certain sources emit or would emit in violation of the prohibition in section 110(a)(2)(D)(i)(I) will be deemed made as of certain specified dates if certain events do not occur by those dates. More specifically, a finding that new or existing sources, for which EPA has made an affirmative technical determination, do emit in violation of section 110(a)(2)(D)(i)(I) will be

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significantly to Pennsylvania.

deemed made:

* As of November 30, 1999, if by such date EPA does not issue either a proposed approval, under section 110(k) of the CAA, of a SIP revision submitted by such State to comply with the requirements of the NOx SIP call; or a final FIP meeting such requirements for such State in which the affected sources are or will be located,
* As of May 1, 2000, if by November 30, 1999, EPA proposes to approve the SIP revision described above for such State, but, by May 1, 2000, EPA does not fully approve the SIP revision or promulgate a FIP meeting the requirements of the NOx SIP call for such State.

The EPA also is determining that any such finding as to any such major source or group of stationary sources would be considered a finding under section 126(b) and, therefore, would trigger the remedial requirements of this final rule. At such time as a finding is deemed made, EPA intends to publish a notice in the Federal Register announcing the source categories and locations affected by the finding.

Furthermore, any portion of a petition for which

EPA is making an affirmative technical determination (as described above) shall be deemed denied as of May 1, 2000, if a section 126(b) finding has not been deemed to have been made by that date. In other words, if EPA has taken final action putting into place a SIP or FIP meeting the requirements of the NOx SIP call, any outstanding portions of petitions will be deemed denied as of the date of approval of the SIP or promulgation of the FIP. In addition, after a section 126(b) finding has been deemed made as to sources or groups of stationary sources in an upwind State, that finding will be deemed withdrawn, and the corresponding part of the relevant petition(s) denied, if the Administrator either approves a SIP or promulgates a FIP which complies with the requirements of the NOx SIP call for such upwind State. This would minimize any overlap between an effective section 126(b) finding, on one hand, and the application of satisfactory SIP or FIP provisions, on the other.

2. Portions of Petitions for Which EPA Is Not Making an Affirmative Technical Determination

Consistent with this overall approach, for the sources for which EPA is not making an affirmative technical determination, EPA is concluding that they do not or would not emit in violation of the section

110(a)(2)(D)(i)(I) prohibition. As a result, EPA is denying each aspect of each petition relating to such sources. Table I-1 shows which States and sources were named in each petition. The EPA is not making affirmative technical determinations for all sources named in the petitions that are located in States not linked to the petitioning State as shown in Tables II-I and II-2. In addition, EPA is not making affirmative technical determinations for sources for which EPA has determined highly cost effective control measures are not available (see Section II.J.) For example, EPA is denying New York's petition as to sources in any State (or portion of a State) named in New York's petition that are outside the large EGU and large non-EGU categories described in Section II.J., as well as any named sources of any type in Tennessee. Another example is that EPA is today denying the petitions from Rhode Island and Vermont in their entirety because EPA has determined that none of the sources named in these petitions is significantly contributing to nonattainment or maintenance problems with respect to the ozone standard(s) for which relief is requested in the petitions.

C. Requirements for Sources for Which EPA Makes a Section 126(b) Finding

The control requirements that would apply to any new or existing major source or group of stationary sources for which a section 126(b) finding is ultimately made are discussed in Section IV below.

Section 126(c) states, in relevant part, that:

> it shall be a violation of this section and the applicable implementation plan in such State
>
> > (1) for any major proposed new (or modified) source with respect to which a finding has been made under subsection (b) to be constructed or to operate in violation of this section and the prohibition of section 110(a)(2)(D)([i]) or this section or
> >
> > (2) for any major existing source to operate more than three months after such finding has been made with respect to it.

The Administrator may permit the continued operation of a source referred to in paragraph (2) beyond the expiration of such 3-month period if such source complies with such emission limitations and compliance schedules (containing increments of progress) as may be provided by the Administrator to bring about compliance with the requirements contained in section 110(a)(2)(D)([i]) as expeditiously as practicable, but in no case later than 3 years after the date of such finding.

The remedial requirements that EPA is finalizing in

today's action for sources for which a section 126(b) finding is ultimately made would satisfy the requirements just quoted. First, EPA is requiring that sources for which a section 126(b) finding is ultimately made must comply with the requirements described in Section IV to ensure that they do not emit in violation of the section 110(a)(2)(D)(i) prohibition. Second, the program EPA is finalizing serves as the alternative set of requirements that the Administrator may apply for the purpose of allowing existing sources subject to a section 126(b) finding to operate for more than 3 months after the finding is made. Consistent with section 126(c), the compliance period in EPA's program extends no further than 3 years from the making of the finding. To the extent a finding is deemed made as of November 30, 1999, compliance will be required by November 30, 2002. But since the program EPA is establishing would require actual emissions reductions only in the ozone season (defined for purposes of this rule as May 1-September 30, inclusive), actual reductions will not need to occur until May 1, 2003, the start of the first ozone season after the November 30, 2002, compliance date. Thus, compliance by November 30, 2002 would not require actual reductions until May 1, 2003. A finding deemed

made as of May 1, 2000 would also yield a May 1, 2003 compliance date. As described in Section V.A.1 of the final NOx SIP call and its Response to Comment document and in Section II.K above, EPA believes that compliance by the ozone season beginning May 1, 2003 is feasible.

IV. Section 126 Control Remedy

In the NPR (63 FR at 56309-56320), EPA proposed to implement a market-based cap-and-trade system to bring sources covered by any final section 126(b) finding into compliance. The Federal NOx Budget Trading Program was proposed as a new part 97 in title 40 of the Code of Federal Regulations. The EPA proposed that the Federal NOx Budget Trading Program would be triggered automatically if EPA makes a final finding of significant contribution as to any sources under section 126(b). Participation in the program would be mandatory for all sources affected by such a finding. As explained in Section IV.C of this preamble, today's rule includes the general parameters of the Federal NOx Budget Trading Program remedy in paragraph (j) of § 52.34. The EPA will issue the remaining elements of the Federal NOx Budget Trading Program by July 15, 1999. Today's rule also includes paragraph (k) of § 52.34, which delineates the interim final emission limitations that will be imposed in the event the Administrator

fails to promulgate (i.e., sign and release to the public) the Federal NOx Budget Trading Program regulations before a finding under section 126 is made. Section IV.D of this preamble describes these default emission limitations.

A. Appropriateness of Trading as a Section 126 Remedy

A market-based cap-and-trade program is a proven method for achieving the highly cost-effective emissions reductions described in section II.J., while providing sources compliance flexibility. As explained in the NOx SIP call SNPR (63 FR at 25918-19), the Ozone Transport Assessment Group (OTAG) identified five advantages of market-based systems: (1) reduced cost of compliance, (2) creation of incentives for early reductions, (3) creation of incentives for emissions reductions beyond those required by regulations, (4) promotion of innovation, and (5) increased flexibility without resorting to waivers, exemptions, and other forms of administrative relief (OTAG 1997 Executive Report, pg. 57).

The Agency received wide support for using the Federal NOx Budget Trading Program as the section 126 remedy. Several commenters cited lower compliance costs as a reason for supporting a cap-and-trade program and generally stated that the section 126

petitions would be satisfied if the sources named in the petitions were included in the trading program. One commenter claimed that pursuant to section 126, EPA has the clear authority to develop, impose, and implement the emissions caps associated with the trading program. Others claimed, however, that trading is not an appropriate section 126 remedy. One commenter questioned EPA's authority to use trading as the section 126 remedy because a section 126 finding requires reductions from specific sources for which a finding of significant contribution is made. That commenter pointed out that trading allows reductions to occur where they are most cost effective without regard to air quality benefits or impacts.

The EPA agrees with the majority of commenters that expressed support for the Federal trading program. The EPA agrees with the assertion that participation in the Federal NOx Budget Trading Program is the most cost-effective method for achieving the reductions required if EPA makes a finding with regard to the section 126 petitions. The EPA rejects the comment that EPA lacks the authority under section 126 to implement a trading program. The EPA finds that it has authority under section 126 to require sources or groups of sources for which a section 126(b) finding is

made to comply with a cap-and-trade program. Section 126(c) provides that such sources or groups of sources may continue to operate if they comply "with such emission limitations and compliance schedules (containing increments of progress) as may be provided by the Administrator to bring about compliance" with section 110(a)(2)(D). Under section 302, an "emission limitation" is a "requirement...which limits the quantity, rate, or concentration of emission of air pollutants on a continuous basis." This term is broad enough to include the limiting of sources' emissions through a cap-and-trade program. In fact, title IV of the Clean Air Act expressly refers to the allowance requirements of the Acid Rain SO2 cap-and-trade program as "emission limitations." See e.g., 42 U.S.C. 7651c(a).

Under a cap-and-trade program, the Administrator sets an emission limitation and compliance schedule for all units subject to the program. The emission limitation for each unit is the requirement that the quantity of the unit's emissions during a specified period (here, the tonnage of NOx emissions during the ozone season) cannot exceed the amount authorized by the allowances that the unit holds. Allowances are allocated to units subject to the program, and the

total number of allowances allocated to all such units for each control period is fixed or capped at a specified level. The compliance schedule is set by establishing a deadline (here, May 1, 2003 as explained in Section III.C of this preamble) by which units must begin to comply with the requirement to hold allowances sufficient to cover emissions. In summary, since EPA has the authority to establish emission limits and compliance schedules under section 126, and allowance requirements include both emission limits and a compliance schedule, EPA has the authority to promulgate allowance requirements and allocate allowances for purposes of section 126.

The Federal NOx Budget Trading Program required in response to a section 126 finding will achieve the intended emissions reductions while providing flexibility and cost savings to the covered sources. The significant reductions incorporated into the cap, or budget, under which the Federal trading program would operate help ensure that the remedy would sufficiently mitigate the transport of ozone as required by any remedy under section 126. This budget represents the sum of NOx allowances allocated each year to affected sources in States covered by any final section 126 findings, calculated as explained in

Section IV.C.1.b of this preamble. (For purposes of the section 126 remedy, this budget is not aggregated to a State level for any purpose other than for the calculation of allowances available for allocation to affected sources. Since the focus in the remedy is sources rather than States, there are no programmatic requirements associated with this budget at the State level.) For commenters concerned about the appropriateness of trading, EPA emphasizes that the trading program has been designed to mitigate the transport of ozone and its precursors to facilitate attainment and maintenance of the ozone NAAQS. The program was proposed based on recommendations from OTAG, experience from the OTC, and the NOx SIP call rulemaking process. Additionally, four of the petitioning States requested that a cap-and-trade program serve as the section 126 remedy.

The analyses performed in conjunction with the NOx SIP call demonstrate that no significant changes in the location of emissions reductions will result from implementation of an unrestricted trading program with a uniform control level, as compared to a traditional command-and-control scenario ("Supplemental Ozone Transport Rulemaking Regulatory Analysis", April 1998, pp. 2-19). The trading program will therefore allow

named sources to retain some flexibility in meeting the emission limitations, but also will ensure that the necessary NOx reductions are achieved to mitigate the transport of ozone.

B. Relationship of the Section 126 Remedy to the NOx SIP call and the Proposed FIP

In the section 126 NPR (63 FR at 56309), the EPA proposed to establish a common trading program among sources subject to a trading program under the NOx SIP call, a section 126 remedy or a FIP. This common trading program could include all sources in States found to be significantly contributing to nonattainment or interfering with maintenance of the ozone standard in another State. Sources subject to the Federal NOx Budget Trading Program under the section 126 rulemaking or the FIP, and sources in States choosing to participate in the State NOx Budget Trading Program under the SIP call, could trade with one another across participating States under a NOx cap equivalent to the sum of the NOx emissions allocated to sources in participating States.

The commenters almost uniformly supported integrating the trading programs under the NOx SIP call, section 126 rulemaking, and the FIP. One commenter stated that aligning the program requirements

could lessen unnecessary compliance costs, promote greater certainty in compliance planning, and reduce the potential administrative burdens on both the regulatory and regulated communities. Most commenters cited that all three programs address the same transport problem and integrating them would achieve the environmental objective at least cost and with more flexibility for the affected sources. One commenter did not believe a trading program was an appropriate remedy for the section 126 petitions (addressed in section IV.A.), and therefore, the section 126 remedy should not be integrated with the NOx SIP call and the FIP trading programs.

As stated in the section 126 NPR, all three rulemaking actions (the NOx SIP call, the FIP, and the section 126 rulemaking) are aimed at reducing transport of ozone by controlling emissions from sources in a given State that are found to be contributing significantly to nonattainment or interfering with maintenance in another State. The EPA agrees with commenters that, because all three programs were intended to achieve the same environmental objective, it would be possible to integrate the programs and maintain the integrity of this environmental objective.

In order to be eligible to participate in a cap-and-trade program, the EPA believes that there are certain criteria that sources must meet (e.g., they must accurately and consistently account for all of their emissions). See Section 126 NPR, 63 FR at 56310. Because the sources in States that choose to participate in the cap-and-trade program outlined in the final NOx SIP call (40 CFR part 96) will meet these criteria, the sources subject to this section 126 action will meet these criteria, and the sources in States that would be subject to the proposed FIP (with the exception of cement kilns and IC engines, which are not included in the trading program) will meet these criteria, EPA supports the establishment of a common trading program. Therefore, EPA has determined that sources subject to the Federal NOx Budget Trading Program under section 126 or the proposed FIP, and sources in States choosing to participate in the State NOx Budget Trading Program under the NOx SIP call, could trade with one another under a NOx cap across participating States equivalent to the sum of the NOx caps of the individual States. In addition, in rejecting concerns about the appropriateness of one common trading program as a remedy, EPA relies on the analyses performed in conjunction with the NOx SIP

call, which demonstrated that implementation of a single trading program with a uniform control level results in no significant changes in the location of emissions reductions as compared to a non-trading scenario ("Supplemental Ozone Transport Rulemaking Regulatory Analysis," April 1998, pp. 2-19).

C. Federal NOx Budget Trading Program

Under the terms of the consent decree with petitioning states, EPA must take final action on a remedy under section 126 by April 30, 1999. In accordance with that requirement, EPA is promulgating the general parameters of the remedy in paragraph (j) of § 52.34. The general parameters of the remedy promulgated today include the decision to employ a cap-and-trade program as the aggregate remedy, identification of the categories of sources subject to the trading program, specification of the basic emission limitation for the covered source categories, specification of the total emissions reductions to be achieved by the trading program, and the compliance date. Since EPA is not promulgating in today's rule the unit-specific allocations or 40 CFR part 97 rule provisions providing the details of the trading program for the section 126 remedy (as explained in Section IV.C.2), today's final rule specifies that EPA will

issue these elements of the Federal NOx Budget Trading Program by July 15, 1999. The EPA is committed to acting quickly in promulgating the remaining elements of the Federal NOx Budget Trading Program. The EPA has therefore specified the date in §52.34 by which those elements will be promulgated, and has delineated in paragraph (k) of § 52.34 the interim final emission limitations that will be imposed in the event the remaining elements of the Federal NOx Budget Trading Program are not promulgated, as explained in Section IV.D of this preamble.

1. Elements of the Section 126 Remedy Promulgated with Today's Rulemaking

The intent of EPA's action today is to prescribe the general parameters of the section 126 remedy and postpone the details of the Federal NOx Budget Trading Program until July 1999. Today's rule includes part 52, which establishes the general parameters of the Federal NOx Budget Trading Program as well as the default emission limitations should EPA fail to promulgate the details of the trading program and allocation provisions. Specifically, the regulatory language finalized today specifies the following elements, listed here and explained in further detail

in Sections IV.C.1.a and IV.D.1, below:

- All large EGUs and large non-EGUs for which EPA makes a final finding under section 126(b) will be covered by and subject to the Federal NOx Budget Trading Program.

- Beginning May 1, 2003, the owner or operator of each source subject to the Federal NOx Budget Trading Program must hold total NOx allowances available to that source in the ozone season that are not less than the total NOx emissions emitted by the source during that ozone season.

- The total tons of NOx allowances allocated under the trading program (other than any compliance supplement pool credits) will be equivalent to the sum of two tonnage limits:

  (A) The total tons of NOx that large EGUs in the program would emit in an ozone season after achieving a 0.15 lb/mmBtu NOx emissions rate, assuming historic ozone season heat input adjusted for growth to the year 2007; plus

(B) The total tons of NOx that large non-EGUs in the program would emit in an ozone season after achieving a 60 percent reduction in ozone season NOx emissions compared to uncontrolled levels adjusted for growth to the year 2007.

- If EPA makes a final finding under section 126(b) for any large EGUs and large non-EGUs and fails to promulgate the trading program regulations, owners or operators shall control emissions from such units so that each unit does not emit NOx emissions in excess of the unit's allocated NOx allowances. Moreover, NOx allowances will be allocated to large EGUs and large non-EGUs according to the methodology originally set forth in the proposed part 97.

- Compliance supplement pool credits may be available for distribution to affected sources, subject to specific State-by-State tonnage limits as established in the SIP call.

a. Compliance Schedule and Emission Limitation.

Section 52.34(j)(1) in today's final rule serves to establish a compliance schedule, i.e., the May 1, 2003

start date for the control program, as well as the general emission limitations for the large EGUs and large non-EGUs covered by any final section 126 remedy (see section II.I of this preamble for EGU and non-EGU definitions). Although section 126 findings are made for sources or source categories (as required by section 126), the section 126 remedy described in today's final rule applies at the unit level rather than the source level. This reflects the fact that many sources have multiple emission units and already report emissions at the unit level.

Section 52.34(j)(1) requires the owners or operators of each such unit to hold total "NOx allowances available" for the ozone season not less than the unit's NOx emissions during that ozone season. The NOx allowances -- each allowance representing a limited authorization to emit one ton of NOx – would be the currency used in the Federal NOx Budget Trading Program. The term "available" is intended to be sufficiently broad to include not only NOx allowances allocated to the unit, but additional NOx allowances which may be available through trading or banking to the extent such flexibility is incorporated into the final Federal NOx Budget Trading Program, as well as allowances from the compliance supplement pool in the

2003 and 2004 ozone seasons to the extent they are distributed.

b. Trading Program Budget. In today's final rule, EPA describes the methodology used to determine the NOx emissions budget, i.e., the total amount of NOx allowances allocated to all units subject to the Federal NOx Budget Trading Program in a State for purposes of any section 126 finding. As noted in Section IV.A of this preamble, for purposes of the section 126 remedy, this budget is not aggregated to a State level for any purpose other than for the calculation of allowances available for allocation. Section 52.34(j)(3) indicates that the total available allowances will be calculated consistently with the method used in developing the NOx SIP call budgets in 40 CFR part 51, as described in the preamble to the final NOx SIP call. The number of available allowances will be equal to the sum of the tonnage limits explained in the following two paragraphs. The EPA will calculate these emissions budgets following the issuance of the final revised inventory for the SIP call and this section 126 rulemaking.

For large EGUs, the total tonnage limit will be determined by applying a 0.15 lb/mmBtu emission rate to either the 1995 or 1996 heat input level (whichever is

higher for a particular State) projected to the year 2007 in a manner consistent with the methodology EPA used in developing the NOx SIP call budgets. The EPA used forecasts of future electricity generation to apply State-specific growth factors in calculating the emissions budgets for the electricity generating sector. The Agency derived these State specific growth factors from application of the Integrated Planning Model (IPM) using the 1998 Base Case (the condition of the industry in the absence of the NOx SIP call). A complete explanation of how EPA uses IPM to determine growth factors is included in EPA's Analyzing Electric Power Generation under the CAAA, March 1998.

Non-EGU point source inventory data for 1995 were grown to 2007 using Bureau of Economic Analysis (BEA) historical growth estimates of industrial earnings at the State 2-digit Standard Industrial Classification (SIC) level. Where source specific SIC data were not available, associated Source Classification Code (SCC) growth rates were used. In those cases where a State or industry may have had more accurate information than the BEA forecast (e.g., planned expansion or population rates), data were verified and validated by the affected States and by EPA, and revisions were made to the factors used for that category.

A fixed number of NOx allowances will be allocated to units for each ozone season equal to the total amount of the aggregate emissions (as calculated above) allowed for the units in each State included in the Federal NOx Budget Trading Program for purposes of the section 126 remedy. The specific unit allocations as well as the specific methodology will be provided with the provisions of the Federal NOx Budget Trading Program when part 97 is promulgated by July 15, 1999. The regulatory language finalized today leaves the Agency free to adopt a method for determining individual unit allocations in a manner different from the method used to determine unit emissions in the NOx SIP call inventory.

c. Compliance Supplement Pool. In today's final rule, EPA includes a compliance supplement pool, as delineated in §52.34(j)(4). In the Section 126 NPR, EPA proposed that part 97 would include a compliance supplement pool consistent with the compliance supplement pool finalized with the NOx SIP call (63 FR at 56318). The Agency had received comments in response to the proposals for the NOx SIP call expressing concern that some sources may encounter unexpected problems installing controls by the May 1, 2003 deadline. The commenters suggested that these

unexpected problems could cause unacceptable risk for a source and its associated industry. In particular, commenters expressed concern related to the electricity industry, stating that the deadline could adversely impact the reliability of electricity supply.

The EPA addressed these concerns in the SIP call by providing additional flexibility for sources to comply with requirements (see also section II.K). One element of this flexibility is the compliance supplement pool, which ensures that there are a limited number of allowances available in addition to State budgets at the start of the program. The EPA proposed to use the same compliance supplement pools on a State-by-State basis for the section 126 remedy as were included in the final NOx SIP call.

The majority of the commenters supported inclusion of the compliance supplement pool in the Federal NOx Budget Trading Program. These commenters asserted that the pool is necessary for sources that are unable to meet the compliance deadline and to alleviate concerns about electric supply reliability. However, three petitioning States argued that the CAA does not authorize a compliance supplement pool. These States commented that the pool effectively extends the compliance period under section 126 from 3 to 5 years.

One State maintained that the compliance supplement pool compromises the relief sought by its section 126 petition and requested that the States against which its petition was directed not be permitted to rely on the pool. An additional State commenter suggested that delay of the compliance deadline was not warranted and supported this conclusion with an example of an SCR installation that only took 6 months. That State also commented that if EPA does adopt the compliance supplement pool, the portion of the compliance supplement pool allotted to States in the Ozone Transport Commission (OTC) should be apportioned to the combined OTC States rather than individual States because that would provide for less forfeiture of OTC banked allowances. Since each State could bring banked allowances under the OTC into the Federal NOx Budget Trading Program up to the level of their compliance supplement pool, pooling allowances among OTC States would allow these States to ensure maximum incorporation of banked allowances. Another OTC State asserted that the States in the OTC are given disproportionately small compliance supplement pools as a result of the stricter controls already installed on their sources.

Consistent with the decision made for the NOx SIP

call, the Agency is including the compliance supplement pool as part of its section 126 remedy, as delineated in §52.34(j)(4). Although the Agency agrees with the commenters who asserted that States affected by the NOx SIP call could reasonably achieve the reductions in the time-frame specified (see section III.K of this preamble and section III.F.6 of the final NOx SIP call preamble), EPA created the additional pool of emissions to address concerns about the compliance deadline. Those same concerns exist for sources subject to a section 126 finding and we affirm and incorporate into this rulemaking the rationales for the compliance supplement pool offered in the SIP call final rule. Therefore, EPA is including the compliance supplement pool in the Federal NOx Budget Trading Program.

The Agency disagrees with commenters that assert that EPA lacks authority to include the compliance supplement pool and also disagrees with commenters who stated that the compliance supplement pool compromises the relief sought under section 126. The Agency disagrees with the commenters' assertions that the compliance supplement pool delays the compliance deadline beyond the 3 years required by section 126. The compliance deadline for the covered sources is 3 years from the date the finding is made (which results

in a May 1, 2003 deadline, as explained in Section III.C) and the compliance supplement pool is an inherent part of the remedy and concomitant emissions reductions required to be achieved at that time, just as are the trading provisions. Thus, this rule will require compliance with the Federal NOx Budget Trading program as the remedy within the three year timeframe contemplated by the CAA.

The section 126 remedy incorporates a reasonable degree of flexibility with these compliance supplement pool provisions, while still ensuring the necessary reductions to mitigate the transport of ozone since the level of NOx emissions authorized through the remedy is fixed. Capping the compliance supplement pool ensures limited impact on emissions. Further, credits issued from the compliance supplement pool will not be valid for compliance past the 2004 ozone season.

The Agency disagrees with commenters who suggest that the compliance supplement pool should be distributed in a manner different from the method described in the proposal. The compliance supplement pool will be distributed, as proposed, proportionately to the level of reductions required in each State by the NOx SIP call for those States whose sources are covered by any section 126 remedy. The final rule

adopts the method in the NOx SIP call for distributing the pool to each State because that method directly addresses the reason for the creation of the pool: to address concerns that the emission reductions required would create undue risk to the industry affected by the controls. Therefore, the Agency rejects comments asserting that the OTC States' share of the compliance supplement pool is disproportionately small and that the compliance supplement pool allowances should be aggregated across the OTC. Each State's share of these additional allowances is based on the same distribution criteria to ensure consistent treatment (in terms of the original justification of the compliance supplement pool) of sources in each State for which a section 126 finding is made. This approach will maintain compatibility with the NOx SIP call for the States covered by the section 126 remedy.

The July rule will specify the criteria and procedures for distributing allowances from the compliance supplement pool to sources affected by the section 126 remedy. Comments relevant to distribution of the compliance supplement pool to sources will be addressed at that time.

2. Elements of the Section 126 Remedy not Finalized with Today's Rulemaking

After finalization of the NOx SIP call on October 27, 1998, EPA provided a 60-day public comment period for review of the NOx SIP call inventory and budgets, which on December 24, 1998 was extended to February 22, 1999 (see Section I.I in this preamble). Because the section 126 rulemaking relies on the same emissions inventory as the NOx SIP call, EPA also reopened the section 126 comment period for emissions inventory comments. The EPA is completing its review of the inventory comments received and has committed to revising the final SIP call inventory and budgets after full evaluation of the comments submitted by States and sources. Following the revision of the inventory, the Agency will finalize the list of Section 126 affected sources, the Federal NOx Budget Trading Program's allocation methodology, the unit-by-unit NOx allowance allocations, and the compliance supplement pool distribution methodology. The Agency did not have sufficient time to properly evaluate comments related to the trading program which were dependent on consideration of the inventory revisions, or to incorporate those inventory revisions into the final trading program prior to today's action.

The Agency has decided that taking until as late as July 15, 1999 to promulgate part 97 and the source

specific allocations will not affect the triggering of the remedy on November 30, 1999 or May 1, 2000 (these trigger dates are explained in Section III.B.1 and tied to the SIP submission process under the NOx SIP call), or affect the May 1, 2003 start date for compliance with the remedy. The Agency has found that the May 1, 2003 implementation date is feasible to achieve given the dates by which a section 126 remedy could be triggered (see preamble section III.K.). Because the section 126 remedy can not be triggered until November 30, 1999 at the earliest, issuing final trading program regulations by July 15, 1999 will not affect the trigger dates and therefore will not affect implementation of the section 126 remedy.

Therefore, by July 15, 1999, the Administrator will promulgate regulations setting forth the remaining elements of the section 126 remedy. The July rulemaking will describe in detail the entire Federal NOx Budget Trading Program, summarize and respond to comments on the proposed program provisions and unit allocations, and present the specific unit allocations that would be imposed under a section 126(b) finding. The July rulemaking will also specify the methodology for distribution of allowances from the compliance supplement pool. However, should the Administrator

fail to promulgate the trading program regulations before a section 126 finding is made, the interim final emission limitations described in Section IV.D will apply.

D. Default Emission Limitations in the Absence of a Promulgated Federal NOx Budget Trading Program

The Agency has committed to promulgating regulations setting forth the Federal NOx Budget Trading Program by July 15, 1999, including the allocation of NOx allowances under the program. By that date EPA will have considered the comments received on the trading program and the individual unit allocations and will be able to respond to these comments in making a final determination on allocations and other trading program provisions.

As discussed in Section I.E. of this preamble, EPA entered into a consent decree with the petitioning States that committed the Agency to developing a final section 126 remedy by April 30, 1999. As part of today's action, the Agency is promulgating on an interim basis emission limitations that will be imposed in the event a finding under section 126 is made and the Administrator does not promulgate the Federal NOx Budget Trading Program regulations before such finding. EPA is finalizing the default emissions limitations

remedy set forth in section 52.34(k) under the "good cause" exemption to the Administrative Procedure Act's requirements for rulemaking. See 5 U.S.C. 553(b)(B). As noted elsewhere, taking into account the comments received on the appropriate remedy is impracticable given the court-ordered deadline and the volume of comments received. The EPA does not expect the default remedy set forth in section 52.34(k) to ever be applied, for the reasons explained in this section. When EPA promulgates the details of the Federal NOx Budget Trading Program (40 CFR Part 97), section 52.34(k) will be superseded as a matter of law and EPA will take action to delete section 52.34(k) accordingly.

The EPA believes that today's action, even without any default emission limitations, meets the terms of the consent decree. However, this rule limits a unit's emissions to the amount of its allocated allowances to provide a remedy (in addition to the statutory remedy under section 126) by ensuring that unit-specific emission limitations are in place in the event that the Administrator fails to promulgate the Federal NOx Budget Trading Program regulations and a section 126 finding is made. In that event, the amount of allowances allocated to each unit will be that unit's

emission limitation in the absence of trading provisions.

As discussed in Section III.B.1. of this preamble, any section 126 remedy would not be triggered before November 30, 1999 at the earliest. Therefore, the interim remedy discussed in this section will not apply unless the remedy is triggered and the Administrator has not promulgated the Federal NOx Budget Trading Program regulations. Further, as would be the case for the Federal NOx Budget Trading Program, unit compliance with any section 126 remedy (whether it is the default emission limitations described in this section or the Federal NOx Budget Trading Program regulations to be promulgated in July) would not be required until May 1, 2003.

The methodology presented in this action for calculating the allowance allocations mirrors the methodology for allocating allowances described in the proposed part 97 (63 FR 56315), with changes to account for incorporation of the rule language into part 52. Each of these NOx allowance allocations will serve as a unit-specific emission limitation only if a finding under Section 126 is made and the Administrator fails to promulgate regulations setting forth the Federal NOx Budget Trading Program before such finding. If the

Administrator promulgates such regulations prior to the triggering of a section 126 remedy, the unit-specific emission limitations described in section 52.34(k) will not apply.

The EPA emphasizes that these allocations provide a default remedy under the consent decree and that EPA is committed to establishing final allocations, as well as trading program provisions, by July 15, 1999. The Agency has included these interim final limitations in order to assure the petitioning States that emission limitations will be in place should a final section 126 finding be made and the Administrator has failed to promulgate the Federal NOx Budget Trading Program regulations. As explained in Section IV.D.2, the Agency is incorporating as a default remedy the proposed part 97 methodology, but this does not represent the Agency's final determination on allowance allocations under the NOx Budget Trading Program. The Agency is continuing to review comments received on the proposed allocation methodologies and will come to a final decision by July 15, 1999. The proposed part 97 rule language describing the allowance allocation methodology is included in today's rule without significant change in order not to pre-judge any decision the Agency will make on allocations.

Further, EPA acknowledges that assigning these allowance allocations as unit-specific emission limitations in the absence of a trading program is not necessarily within the cost-effectiveness bounds delineated in Section II.J. However, given that the statutory alternative remedy to not promulgating emission limitations at this time is requiring the shutdown of units within 3 months of a finding under section 126(b) of the Act, today's action to meet the terms of the consent decree represents a more cost-effective alternative. Nonetheless, the Agency is concerned about meeting the cost-effectiveness criteria. For this reason, as well as for the reason that the allocation methodology included in today's rule does not necessarily reflect the Agency's final decision on allocations, EPA reiterates its commitment to promulgate the regulations and unit-specific allocations to implement the Federal NOx Budget Trading Program by July 15, 1999.

1. Default Emission Limitations

Section 52.34(k) sets forth the provisions for how the Administrator will allocate NOx allowances to sources for which EPA makes a finding under section 126(b), in the event that the Administrator fails to promulgate the Federal NOx Budget Trading regulations.

The methodology for determining the individual unit emission limitations included in this action incorporates rule language that was proposed in §97.42 (63 FR 56315) for determining allowance allocations. The EPA has incorporated §97.42 as proposed, with changes only where necessary to account for the incorporation of the proposed §97.42 into §52.34. Specifically, the Agency removed any references to terminology or provisions of other sections of proposed part 97, in order to refer instead to the relevant terminology or provisions of part 52 or delete entirely references relevant only to participation in a trading program. For example, in order to maintain consistent terminology with §52.34, EPA replaced the term "NOx Budget unit" with the term "large EGUs and large non-EGUs."

a. **Default Emission Limitations for Existing Units**

As was described in the proposed §97.42, §52.34(k) bases the allowance allocations on heat input data. For large EGUs, initial unadjusted allocations would be based on actual heat input data (in mmBtu) for the units multiplied by an emission rate of 0.15 lb/mmBtu. For the ozone seasons in 2003, 2004, and 2005, the heat input used in the allocation calculation for large EGUs equals the average of the heat input for the two

highest ozone seasons for the years 1995, 1996, and 1997. The emission limitations for each unit would then be adjusted upward or downward so that the total allocations for large EGUs in the State match 95 percent (to provide for a 5 percent new source set-aside) of the total ozone season NOx emissions calculated for large EGUs in each State (see section IV.C.1.b. of this preamble).

For the ozone seasons starting in 2006, the heat input used in the allocation calculation for large EGUs equals the heat input measured during the ozone season of the year that is four years before the year for which the allocations are being calculated. The emission limitations would be determined by multiplying the heat input by 0.15 lb/mmBtu, and then adjusting the result so that the sum of the allocations to each EGU in the State equals 98 percent (to provide for a 2 percent new source set-aside) of the total ozone season NOx emissions calculated for large EGUs in each State.

For large non-EGUs, initial unadjusted allocations would be based on 1995 heat input data (in mmBtu) for the units multiplied by an emission rate of 0.17 lb/mmBtu (the average emission rate for existing non-EGUs after controls are in place). As discussed in the section 126 NPR, this differs from the method used to

determine the aggregate emission level for non-EGUs (a percentage reduction from historical emissions) because at the time the aggregate level was determined (during the NOx SIP call proposal process), heat input data for individual units was not available. Distributing allocations on a heat-input basis provides a fuel-neutral method of allocating allowances to the units in the trading program similar to the allocation approach proposed for the EGUs. This heat-input-based allocation also allows for reallocating in the future (to accommodate new units) whereas allocations based upon a specific percentage reduction do not.

The emission limitations for each unit would then be adjusted upward or downward so that the total allocations for large non-EGUs in the State match 95 percent (to provide for a 5 percent new source set-aside) of the total ozone season NOx emissions calculated for large non-EGUs in each State.

As described for large EGUs, for the ozone seasons starting in 2006, the heat input used in the allocation calculation for large non-EGUs equals the heat input measured during the ozone season of the year that is four years before the year for which the allocations are being calculated. The emission limitations would be determined by multiplying the heat input by 0.17

lb/mmBtu, and then adjusting the result so that the sum of the allocations to each non-EGUs in the State equals 98 percent (to provide for a 2 percent new source set-aside) of the total ozone season NOx emissions calculated for large non-EGUs each State.

b. Default Emission Limitations for New Units

The proposed §97.42 contained a new source set-aside of 5 percent for the ozone seasons of 2003, 2004 and 2005 and 2 percent for each subsequent year. For purposes of this interim final remedy, the set-aside would enable new units, which did not operate during the full baseline periods used in assigning allocations to existing sources, to still receive an allowance allocation.

As described in §52.34(k), the allowances would be issued to new sources on a first-come, first-served basis at a rate of 0.15 lb/mmBtu for large EGUs and 0.17 lb/mmBtu for large non-EGUs multiplied by the unit's maximum design heat input. Following each ozone season, the source would be subject to a reduced utilization calculation, in which EPA would deduct NOx allowances based on the unit's actual utilization. Because the allocation for a new unit from the set-aside is based on maximum design heat input, this procedure adjusts the allocation by actual heat input

for the ozone season of the allocation. This adjustment is a surrogate for the use of actual utilization in a prior baseline period which is the approach used for allocating NOx allowances to existing units.

At the end of the relevant ozone season, EPA would allocate any allowances remaining in the account to the existing sources in the State on a pro-rata basis. This would have the effect of increasing each existing source's emission limitation for that ozone season.

2. July 15, 1999 Allocation Decisions

The methodology described above is included in §52.34 as a default remedy under the consent decree with the section 126 petitioners. The EPA emphasizes that no decisions have yet been made as to the allocation methodology that will be included in the Federal NOx Budget Trading Program promulgated in July. Today's default remedy reflects only what was initially proposed in §97.42 and does not reflect any comments or new information received since the proposal. As explained in Sections I.I and IV.C.2 of this preamble, the Agency has not yet had sufficient time to incorporate SIP call inventory revisions into trading program policy decisions and analysis. The Agency intends to use this revised data when it becomes

available, along with the comments received on the trading program generally and allocations specifically, to make a decision on the allocation methodology and other aspects of the trading program by July 15.

Specifically, the Agency has not yet made decisions regarding the basis for allocations, the frequency with which the allocations might be updated (including whether they will be updated), or who might be eligible to receive allowances. In the NPR for the section 126 rulemaking, EPA proposed three possible allocation methodologies and corresponding individual unit allocations for EGUs. The first methodology proposed to allocate allowances based on the heat input methodology that was included in §97.42 and is used for the interim final emission limitations in §52.34(k) of this action. The second methodology proposed would allocate to fossil fuel-fired electric generators based on share of total electricity generation. The third methodology would issue allowances to all electricity generators based on their share of total electricity generation.

Selection of the first of these proposed methodologies for the interim final emission limitations does not indicate that the Agency prefers that option. The heat input option was included as a

default only because it had already been proposed in rule language in part 97. The Agency is continuing to review comments, and the Administrator will promulgate regulations by July 15, 1999 which establish the basis for allowance allocations, as well as who will receive allowances.

Likewise, the methodology that describes an annually updating system starting in 2006 was included as the interim remedy because that was proposed in the §97.42 rule language. The Agency has not yet made a decision regarding whether the allowance allocations in the Federal NOx Budget Trading Program will be updated periodically or how often they might be updated. The Agency will make a final determination by July 15, 1999 after consideration of comments.

In addition, the Agency has received numerous comments on other aspects of the proposed allocation methodologies and will continue to review these. The Agency will provide final determinations and responses to these comments by July 15, 1999.

V. Non-ozone Benefits to NOx Reductions

In addition to contributing to attainment of the ozone NAAQS, decreases of NOx emissions will also likely help improve the environment in several important ways. On a regional scale, decreases in NOx

emissions will also decrease acid deposition, nitrates in drinking water, excessive nitrogen loadings to aquatic and terrestrial ecosystems, and ambient concentrations of nitrogen dioxide, particulate matter, and toxics. Thus, management of NOx emissions is important to both air quality and watershed protection. In its July 8, 1997 final recommendations, OTAG stated that it "recognizes that NOx controls for ozone reductions purposes have collateral public health and environmental benefits, including reductions in acid deposition, eutrophication, nitrification, fine particle pollution, and regional haze." These and other public health and environmental benefits associated with decreases in NOx emissions are summarized qualitatively below.[34]

Justification for Rulemaking: While EPA believes the information discussed in this section is important for the public to understand and, thus, needs to be described as part of the rulemaking and RIA, there should be no misunderstanding as to the legal basis for the rulemaking, which is described in Section II of this notice and does not depend on the non-ozone

[34]U.S. Environmental Protection Agency, "Nitrogen Oxides: Impacts on Public Health and the Environment," EPA-452/R-97-002, August 1997.

benefits. The non-ozone benefits did not affect the method in which EPA determined significant contribution nor the control requirements.

Acid Deposition: Sulfur dioxide and NOx are the two key air pollutants that cause acid deposition (wet and dry particles and gases) and result in the adverse effects on aquatic and terrestrial ecosystems, materials, visibility, and public health. Nitric acid deposition plays a dominant role in the acid pulses associated with the fish kills observed during the springtime melt of the snowpack in sensitive watersheds and recently has also been identified as a major contributor to chronic acidification of certain sensitive surface waters.

Drinking Water Nitrate: High levels of nitrate in drinking water is a health hazard, especially for infants. Atmospheric nitrogen deposition in sensitive watersheds can increase stream water nitrate concentrations; the added nitrate can remain in the water and be transported long distances downstream.

Eutrophication: NOx emissions contribute directly to the widespread accelerated eutrophication of United States coastal waters and estuaries. Atmospheric nitrogen deposition onto surface waters and deposition to watershed and subsequent transport into the tidal

waters has been documented to contribute from 12 to 44 percent of the total nitrogen loadings to United States coastal water bodies. Nitrogen is a nutrient which enhances growth of algae in most coastal waters and estuaries. Thus, addition of nitrogen results in accelerated algae and aquatic plant growth causing adverse ecological effects and economic impacts that range from nuisance algal blooms to oxygen depletion and fish kills.

Nitrogen Dioxide (NO_2): Exposure to NO_2 is associated with a variety of acute and chronic health effects. The health effects of most concern at ambient or near-ambient concentrations of NO_2 include mild changes in airway responsiveness and pulmonary function in individuals with pre-existing respiratory illnesses and increases in respiratory illnesses in children. Currently, all areas of the United States monitoring NO_2 are below EPA's threshold for health effects.

Nitrogen Saturation of Terrestrial Ecosystems: Nitrogen accumulates in watersheds with high atmospheric nitrogen deposition. Because most North American terrestrial ecosystems are nitrogen limited, nitrogen deposition often has a fertilizing effect, accelerating plant growth. Although this effect is often considered beneficial, nitrogen deposition is

causing important adverse changes in some terrestrial ecosystems, including shifts in plant species composition and decreases in species diversity or undesirable nitrate leaching to surface and ground water and decreased plant growth.

Particulate Matter (PM): NOx compounds react with other compounds in the atmosphere to form nitrate particles and acid aerosols. Because of their small size nitrate particles have a relatively long atmospheric lifetime; these small particles can also penetrate deeply into the lungs. The PM has a wide range of adverse health effects.

Toxic Products: Airborne particles derived from NOx emissions react in the atmosphere to form various nitrogen containing compounds, some of which may be mutagenic. Examples of transformation products thought to contribute to increased mutagenicity include the nitrate radical, peroxyacetyl nitrates, nitroarenes, and nitrosamines.

Visibility and Regional Haze: The NOx emissions lead to the formation of compounds that can interfere with the transmission of light, limiting visual range and color discrimination. Most visibility and regional haze problems can be traced to airborne particles in the atmosphere that include carbon compounds, nitrate

and sulfate aerosols, and soil dust. While the major cause of visibility impairment in the eastern United States is sulfates, NOx emissions also contribute to visibility impairment.

VI. Administrative Requirements

A. Executive Order 12866: Regulatory Impact Analysis

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients

thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The EPA believes that this action is a "significant regulatory action" because it raises novel legal and policy issues arising from the Agency’s obligation to respond to the section 126 petitions, and because the action could have an annual effect on the economy of more than $100 million. As a result, the final rulemaking was submitted to OMB for review . EPA is referencing the impacts in the final NOx SIP call and proposed section 126 petitions RIA for the final section 126 rule and has not prepared a new RIA for the final rule at this time. Any written comments from OMB to EPA and any written EPA response to those comments are included in the docket. The docket is available for public inspection at the EPA's Air Docket Section, which is listed in the ADDRESSES section of this preamble. The RIA is available in hard copy by contacting the EPA Library at the address under “Availability of Related Information” and in electronic form as discussed above in that same section.

The RIA for the section 126 petitions addresses the costs and benefits associated with reducing

emissions at sources affected under the petitions in the broader context of those sources potentially affected by the final NOx SIP call and the proposed FIP. Sources named in the section 126 petitions may also be controlled under SIPs that will be revised to meet final NOx budgets. The EPA has proposed that in the event that States fail to submit approvable SIPs, FIPs will be enacted. Therefore, the sources named in section 126 petitions may be complying with either State or Federal regulations of generally equivalent stringency.

The RIA for the final NOx SIP call and section 126 petitions concludes that the national annual cost of possible State actions to comply with the NOx SIP call is approximately $1.7 billion (1990 dollars). The sources named in the section 126 petitions will bear the majority of that total cost. The EPA will revise this total cost estimate when it promulgates the NOx trading program for this section 126 rulemaking. The EPA anticipates the total cost for this section 126 rulemaking will not exceed the NOx SIP call estimate. The associated benefits from the NOx SIP call, in terms of improvements in health, visibility, and ecosystem protection, that EPA has quantified and monetized range from $1.1 billion to $4.2 billion. Due to practical

analytical limitations, the EPA is not able to quantify and/or monetize all potential benefits of the NOx SIP call action. It is anticipated that the majority of these quantified and monetized benefits are associated with the section 126 action because the majority of emission reductions, and the associated exposed populations and ecosystems, are from sources potentially covered by SIP revisions, and these sources may also be covered by this section 126 action.

Due to practical analytical and data limitations, such as a lack of air quality modeling based on the final section 126 inventory data, the EPA is not able to provide a quantified and monetized benefits analysis for the promulgated trading program as part of this section 126 rulemaking in July. The EPA will provide a qualitative benefits assessment for the final section 126 rule in July, and will provide a quantitative benefits analysis for the final rule in October. The qualitative benefits assessment will be included in an RIA. This RIA will also contain estimates of the compliance costs and economic impacts associated with selected regulatory options that will be analyzed as part of the promulgation of the NOx trading program in July.

B. Impact on Small Entities

1. Regulatory Flexibility

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), provides that whenever an agency is required to publish a general notice of final rulemaking, it must prepare and make available a final Regulatory Flexibility Analysis, unless it certifies that the proposed rule, if promulgated, will not have "a significant economic impact on a substantial number of small entities."

In accordance with section 603 of the RFA, EPA prepared an initial regulatory flexibility analysis (IRFA) for this rule (see 63 FR at 56322),and convened a Small Business Advocacy Panel (henceforth called a “Panel”) to obtain advice and recommendations of representatives of the affected small entities in accordance with requirements in the RFA. As per section 604 of the RFA, we also prepared a final regulatory flexibility analysis (FRFA) for today’s final rule. The FRFA addresses the issues raised by public comments on the IRFA which was part of the proposal of this rule. The FRFA is available for review in the docket and is summarized below.

In the process of developing this rulemaking, EPA worked with the Small Business Administration(SBA)and

OMB and obtained input from small businesses, small governmental jurisdictions, and small organizations. On June 23, 1998, EPA's Small Business Advocacy Chairperson convened a Small Panel under section 609(b) of the RFA as amended by SBREFA. In addition to its chairperson, the Panel consists of EPA's Director of the Office of Air Quality Planning and Standards within the Office of Air and Radiation, the Administrator of the Office of Information and Regulatory Affairs within the OMB, and the Chief Counsel for Advocacy of the SBA.

As described in the proposed rule (see 63 FR at 56322), this Panel conducted an outreach effort and completed a report on the section 126 proposal. The report provides background information on the proposed rule being developed and the types of small entities that would be subject to the proposed rule, describes efforts to obtain the advice and recommendations of representatives of those small entities, summarizes the comments that have been received to date from those representatives, and presents the findings and recommendations of the Panel; the completed report, comments of the small entity representatives, and other information are contained in the docket for this rulemaking. The contents of today's action, including the RTC document and the Final Regulatory Flexibility

Analysis, address the six recommendations in the Panel's report.

In addition, EPA will also prepare a small entity compliance guide to assist small entities in complying with this rule as required by Section 212 of the SBREFA.

2. Potentially Affected Small Entities

To define small entities, EPA used the SBA industry-specific criteria published in 13 CFR section 121. The SBA size standards have been established for each type of economic activity under the Standard Industrial Classification (SIC) System. Due to their NOx-emitting properties, the following industries have the potential to be affected by the final section 126 rulemaking:

SIC Codes in Division D: Manufacturing

2611 -- Pulp mills

2819 -- Industrial Inorganic Materials

2821 -- Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers

2869 -- Industrial Organic Chemicals

3312 -- Steel Works, Blast Furnaces, and Rolling Mills

3511 -- Steam, Gas, and Hydraulic Turbines

3519 -- Stationary Internal Combustion Engines

3585 -- Air-Conditioning and Warm-Air Heating Equipment and Commercial and Industrial Refrigeration Equipment

SIC Codes in Division E: Transportation, Communications, Electric, Gas, and Sanitary Services

SIC Major Group 49: Electric, Gas, and Sanitary Services, including:

4911 -- Electric Utilities

4922 -- Natural Gas Transmission

4931 -- Electric and other Gas Services

4961 -- Steam and Air Conditioning Supply

The section 126 rulemaking is potentially applicable to all NOx-emitting entities named in one or more of the section 126 petitions. The EPA estimates that the total number of such entities named in the section 126 petitions is approximately 5200, of which about 1200 are small entities. The EPA's analysis, "Final Regulatory Flexibility Analysis For the Final Section 126 Petitions Under the Clean Air Act Amendments Title I " is contained in the docket for this action, and results from this analysis are given below.

For purposes of today's final action, the section 126 rulemaking will apply only to the following types

of sources: large EGUs, and large non-EGUs. At these size cutoffs, the estimated number of small entities that would be affected is as follows:

Electric Generating Units -- 114 small entities

Industrial Boilers and/or Combustion Turbines -- 31 small entities.

The EPA has further estimated that, of these affected small entities, the following would experience compliance costs equal or greater to 1 percent of their estimated revenues:

Electric Generating Units -- 32 small entities

Industrial Boilers and Combustion Turbines -- 4 small entities.

Of these, EPA estimates that about 18 small entities with electric generating units and 4 small entities with industrial boilers or turbines would experience costs greater than 3 percent of their estimated revenues.

By limiting the small entities covered by the final rule to large EGUs and large non-EGUs, EPA is reducing by over 85 percent the number of small entities otherwise potentially affected by the cap-and-trade program: out of 1200 potentially-affected small entities, over 1000 would be exempted, with only 145 small entities remaining. Commenters have strongly

endorsed these exemptions.

Furthermore, as described in the proposed rule (see 63 FR at 56323), the Panel explored additional options for reducing the impact of the rule on small entities in the context of the NOx cap-and-trade program. The EPA will consider these options and also produce a small entity analysis based on the latest emissions inventory data when it promulgates the NOx trading program for this section 126 rulemaking.

C. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub.L. 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, 2 U.S.C. 1532, EPA generally must prepare a written statement, including a cost-benefit analysis, for any proposed or final rule that "includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more ... in any one year." A "Federal mandate" is defined to include a "Federal intergovernmental mandate" and a "Federal private sector mandate" (2 U.S.C. 658(6)). A "Federal intergovernmental mandate," in turn, is

defined to include a regulation that “would impose an enforceable duty upon State, local, or tribal governments (2 U.S.C. 658(5)(A)(i)), except for, among other things, a duty that is “a condition of Federal assistance (2 U.S.C. 658(5)(A)(i)(I)). A “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector,” with certain exceptions(2 U.S.C. 658(7)(A)).

The EPA is taking the position that the requirements of UMRA apply because this action could result in the establishment of enforceable mandates directly applicable to sources (including sources owned by State and local governments) that would result in costs greater than $100 million in any one year. The UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least-costly, most cost-effective or least-burdensome alternative that achieves the objectives of the rule. The EPA’s UMRA analysis, “Unfunded Mandates Reform Act Analysis For the Proposed Section 126 Petitions Under the Clean Air Act Amendments Title I (Phase I),” is contained in the docket for this action and is summarized below. The results of this analysis are referenced here since there have been no changes in the input data or to the analysis methodology offered

by commenters.

This UMRA analysis examines the impacts of the final section 126 rulemaking on both EGUs and non-EGUs that are owned by State, local, and tribal governments, as well as sources owned by private entities. This final rule potentially affects 65 EGUs that are owned by one State and 24 municipalities (Massachusetts owns 6 units, and the municipalities own the remaining 59 units). In addition, seven non-EGUs owned by two States and five municipalities are potentially affected. The EPA has not identified any units on Tribal lands that would be subject to the rule requirements. The overall costs are dominated by the 65 EGUs and are about $30 million per year.

Under section 203 of UMRA, 2 U.S.C. 1533, before EPA establishes any regulatory requirements “that might significantly or uniquely affect small governments,” EPA must have developed a small government agency plan. The plan must provide for notifying potentially affected small governments; enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates; and informing, educating, and advising small governments on compliance with the regulatory

requirements. Today's final rule does not distinguish EGUs based on ownership, either for those units that are included within the scope of the proposed rule or for those units that are exempted by the generating capacity cut-off. Consequently, the final rule has no requirements that uniquely affect small governments that own or operate EGUs within the affected region. With respect to the significance of the rule's provisions, EPA's UMRA analysis (cited above) demonstrates that the economic impact of the rule will not significantly affect (as defined in Section 203 of UMRA) State or municipal EGUs or non-EGUs, either in terms of total cost incurred and the impact of the costs on revenue, or increased cost of electricity to consumers. Therefore, development of a small government plan under section 203 of UMRA is not required.

Under section 204 of UMRA, 2 U.S.C. 1534, if an agency proposes a rule that contains a "significant Federal intergovernmental mandate," the agency must develop a process to permit elected officials of State, local, and tribal governments to provide input into the development of the proposal." In order to fulfill UMRA requirements that publicly-elected officials be given meaningful and timely input in the process of

regulatory development, EPA has sent letters to five national associations whose members include elected officials. The letters provided background information, requested the associations to notify their membership of the proposed rulemaking, and encourage interested parties to comment on the proposed actions by sending comments during the public comment period and presenting testimony at the public hearing on the proposal. The EPA considered these comments as part of today's final action and EPA will also consider them when finalizing the trading program.

In addition, during the NOx SIP call, EPA provided direct notification to potentially affected State and municipally-owned utilities as part of the public comment and hearing process attendant to proposal of the NOx SIP call and supplemental notice of proposed rulemaking. These procedures helped ensure that small governments had an opportunity to give timely input and obtain information on compliance. The EPA provided the 26 State- and municipally-owned utilities and appropriate elected officials with a brief summary of the proposal and the estimated impacts. The public rulemaking also elicited numerous comments from State and municipal utilities and groups representing utility interests. Commenters generally endorsed the Agency’s

determinations on application of controls to State- and municipally-owned utilities.

Furthermore, for the section 126 rulemaking, EPA published an ANPR that served to provide notice of the Agency's intention to propose emissions limits and to solicit early input on the proposal. This process helped to ensure that small governments had an opportunity to give timely input and obtain information on compliance.

The Agency will revise the UMRA analysis, based on the data in the final section 126 inventory, when it promulgates the NOx trading program for this section 126 rulemaking.

D. Paperwork Reduction Act

The information collection requirements in this final rule will be submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq., when the NOx trading portion of this section 126 rulemaking is promulgated. An Information Collection Request (ICR) document was prepared by EPA for the proposed section 126 rulemaking (see 63 FR at 56325, ICR No. 1889.01) and a copy may be obtained from Sandy Farmer, OP Regulatory Information Division, US Environmental Protection Agency (2137), 401 M St., SW, Washington, DC 20460 or by calling (202) 260-2740.

E. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

1. Applicability of Executive Order 13045

The Executive Order 13045 applies to any rule that EPA determines is (1) "economically significant" as defined under Executive Order 12866, and (2) addressed an environmental health or safety risk that has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. This final rule is not subject to Executive Order 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks"(62 FR 19885, April 23, 1997), because it does not involve decisions on environmental health risks or safety risks that may disproportionately affect children.

2. Children's Health Protection

In accordance with section 5(501), the Agency has evaluated the environmental health or safety effects of the rule on children, and found that the rule does not separately address any age groups. However, in conjunction with the final NOx SIP call rulemaking, the

Agency has conducted a general analysis of the potential changes in ozone and PM levels experienced by children as a result of the NOx SIP call; these findings are presented in volume 2 of the RIA. The findings include population-weighted exposure characterizations for projected 2007 ozone and PM concentrations. The population data includes a census-derived subdivision for the under 18 group. These findings from the final NOx SIP call RIA are also applicable to today's final action since the exposure characterizations are based on emissions from sources potentially covered by SIP revisions, and these sources may also be covered by this section 126 action.

F. Executive Order 12898: Environmental Justice

Executive Order 12898 requires that each Federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minorities and low-income populations. In conjunction with the final NOx SIP call rulemaking, the Agency has conducted a general analysis of the potential changes in ozone and PM levels that may be experienced by minority and low-income populations as a result of the NOx SIP call; these findings are

presented in volume 2 of the RIA. The findings include population-weighted exposure characterizations for projected ozone concentrations and PM concentrations. The population data includes census-derived subdivisions for whites and non-whites, and for low-income groups.

G. Executive Order 12875: Enhancing the Intergovernmental Partnership

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments or EPA consults with those governments. If the mandate is unfunded, EPA must provide to the OMB a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments "to provide meaningful and timely input in

the development of regulatory proposals containing significant unfunded mandates."

The EPA has concluded that this rule may create a mandate on State and local governments and that the Federal government will not provide the funds necessary to pay the direct costs incurred by the State and local governments in complying with the mandate. In order to provide meaningful and timely input in the development of this regulatory action, EPA sent letters to five national associations whose members include elected officials. The letters provided background information, requested the associations to notify their membership of the proposed rulemaking, and encouraged interested parties to comment on the proposed actions by sending comments during the public comment period and presenting testimony at the public hearing on the proposal. The EPA has addressed the concerns of these officials in the UMRA Analysis mentioned in Section V.C. and in the Response to Comments document. A statement supporting the need to issue the regulation is also contained in the UMRA Analysis.

Furthermore, for the section 126 rulemaking, EPA published an ANPR that served to provide notice of the Agency's intention to propose emissions limits and to solicit early input on the proposal. This process

helped to ensure that small governments had an opportunity to give timely input and obtain information on compliance.

H. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If the mandate is unfunded, EPA must provide to the OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments and, in any event, will not impose substantial direct compliance costs on such communities. The EPA is not aware of sources located on tribal lands that could be subject to the requirements EPA is finalizing in this action. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, §12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rulemaking would require all sources that participate in the trading program under proposed part 97 to meet the applicable monitoring requirements

of part 75. Part 75 already incorporates a number of voluntary consensus standards. In addition, the Agency recently revised part 75 to incorporate procedures to monitor and report NOx mass emissions (see 63 FR at 57464). During that rulemaking, process EPA sought comments on additional voluntary consensus standards.

This final rulemaking involves environmental monitoring or measurement. Sources that participate in the trading program would be required to meet the monitoring requirements under part 75. Consistent with the Agency's Performance Based Measurement System (PBMS), part 75 sets forth performance criteria that allow the use of alternative methods to the ones set forth in part 75. The PBMS approach is intended to be more flexible and cost effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. The EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified, however, any alternative methods must be approved in advance before they may be used under part 75.

J. Judicial Review

Section 307(b)(1) of the CAA indicates which

Federal Courts of Appeal have venue for petitions of review of final actions by EPA. This Section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit (i) when the agency action consists of "nationally applicable regulations promulgated, or final actions taken, by the Administrator," or (ii) when such action is locally or regionally applicable, if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

This rulemaking on several section 126 petitions is "nationally applicable" within the meaning of section 307(b)(1). At the core of this rulemaking is EPA's interpretation of sections 126 and 110(a)(2)(D)(i)(I). These interpretations were applied uniformly to each section 126 petition.[35] Further, the modeling which EPA employed to assist in making today's decisions involved uniform modeling techniques and a

[35]EPA interpreted some of the same provisions in the SIP Call final rule, and the U.S. Court of Appeals for the D.C. Circuit agreed with the Administrator that the rule was nationally significant and thus, that venue lies in that circuit. See State of Michigan v. EPA, No. 98-1497 (D.C. Cir., Order, Mar. 19, 1999) (citing Texas Municipal Power Agency v. EPA, 89 F.3d 858, 867 (D.C. Cir. 1996) (per curiam)).

uniform set of air quality metrics to assess upwind impacts on downwind states. In addition, the cost effectiveness information was analyzed and applied uniformly to each petition. Further, the remedy selected by EPA is uniformly applicable to upwind sources in many different states and involves interstate trading of NOx emission allowances. In sum, the numerous legal and technical issues that EPA addressed in this rulemaking apply uniformly to all the sources in 19 states and the District of Columbia about which EPA is making an affirmative or negative determination. Cf. West Virginia Chamber of Commerce v. Browner, 1998 WL 827315, * 7 (4th Cir., Dec. 1, 1998)(the proposed NOx SIP Call Rule is nationally applicable because it "seeks to tackle a problem affecting two-thirds of the country by regulating somewhat less than one half of the states").

For these reasons, the Administrator also is determining that the final action regarding the section 126 petitions is of nationwide scope and effect for purposes of section 307(b)(1). This is particularly appropriate because in the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that an action is of "nationwide scope or effect" would

be appropriate for any action that has "scope or effect beyond a single judicial circuit." H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03. Here, the scope and effect of this rulemaking extend to numerous judicial circuits since the downwind petitioning states lie in the First, Second and Third Circuits of the U.S. Courts of Appeals and the upwind regulated states lie in several other circuits. In these circumstances, section 307(b)(1) and its legislative history calls for the Administrator to find the rule to be of "nationwide scope or effect" and for venue to be in the D.C. Circuit.

Thus, any petitions for review of final actions regarding the section 126 rulemaking must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the Federal Register.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. § 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United

States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A “major rule” cannot take effect until 60 days after it is published in the Federal Register. This action is a "major rule" as defined by 5 U.S.C. § 804(2). This rule will be effective [INSERT 60 DAYS AFTER DATE OF PUBLICATION].

List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control,

Emissions trading, Nitrogen oxides, Ozone transport,

Reporting and recordkeeping requirements.

Dated:

_____

Carol M. Browner,

Administrator

For the reasons set forth in the preamble, part 52 of chapter 1 of title 40 of the Code of Federal Regulations is amended as follows:

PART 52--APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart A - General Provisions [amended]

2. Subpart A is amended to add §52.34 to read as follows:

§52.34 Action on petitions submitted under section 126 relating to emissions of nitrogen oxides.

(a) Definitions. For purposes of this section, the following definitions apply:

(1) *Administrator* means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.

(2) *Large Electric Generating Units (large EGUs)* means:

(i) For units that commenced operation before January 1, 1997, a unit serving during 1995 or 1996 a generator that had a nameplate capacity greater than 25

MWe and produced electricity for sale under a firm contract to the electric grid.

(ii) For units that commenced operation on or after January 1, 1997 and before January 1, 1999, a unit serving at any time during 1997 or 1998 a generator that had a nameplate capacity greater than 25 MWe and produced electricity for sale under a firm contract to the electric grid.

(iii) For units that commence operation on or after January 1, 1999, a unit serving at any time a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale.

(3) *Large Non-Electric Generating Units (large non-EGUs)* means:

(i) For units that commenced operation before January 1, 1997, a unit that has a maximum design heat input greater than 250 mmBtu/hr and that did not serve during 1995 or 1996 a generator producing electricity for sale under a firm contract to the electric grid.

(ii) For units that commenced operation on or after January 1, 1997 and before January 1, 1999, a unit that has a maximum design heat input greater than 250 mmBtu/hr and that did not serve at any time during 1997 or 1998 a generator producing electricity for sale under a firm contract to the electric grid.

(iii) For units that commence operation on or after January 1, 1999, a unit with a maximum design heat input greater than 250 mmBtu/hr that:

(A) At no time serves a generator producing electricity for sale; or

(B) At any time serves a generator producing electricity for sale, if any such generator has a nameplate capacity of 25 MWe or less and has the potential to use 50 percent or less of the potential electrical output capacity of the unit.

(4) *New sources* means new and modified sources.

(5) *NOx* means oxides of nitrogen.

(6) *NOx allowance* means an authorization by the permitting authority or the Administrator to emit up to one ton of nitrogen oxides during the control period of the specified year or of any year thereafter.

(7) *OTAG* means the Ozone Transport Assessment Group (active 1995-1997), a national work group that addressed the problem of ground-level ozone and the long-range transport of air pollution across the Eastern United States. The OTAG was a partnership between EPA, the Environmental Council of the States, and various industry and environmental groups.

(8) *Ozone season* means the period of time beginning May 1 of a year and ending on September 30 of

the same year, inclusive.

(9) *Potential electrical output capacity* means, with regard to a unit, 33 percent of the maximum design heat input of the unit.

(10) *Unit* means a fossil-fuel fired stationary boiler, combustion turbine, or combined cycle system.

(b) Purpose and Applicability. Paragraphs (c) through (h) of this section set forth EPA's affirmative technical determinations, with respect to the national ambient air quality standards (NAAQS) for ozone, that certain new and existing sources of emissions of nitrogen oxides ("NOx") in certain States emit or would emit NOx in amounts that contribute significantly to nonattainment in, or interfere with maintenance by, one or more States that submitted petitions in 1997-1998 addressing such NOx emissions under section 126 of the Clean Air Act. (As used in this section, the term new source includes modified sources, as well.) Paragraph (i) of this section sets forth EPA's decisions about whether to grant or deny each of those petitions, and the remainder of this section sets forth the emissions-reduction requirements that will apply to the affected sources of NOx emissions to the extent any of the petitions are granted.

(1) The States that submitted such petitions are

Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont (each of which, hereinafter in this section, may be referred to also as a "petitioning State").

(2) The new and existing sources of NOx emissions covered by the petitions that emit or would emit NOx emissions in amounts that make such significant contributions are large electric generating units (EGUs) and large non-EGUs.

(c) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in Connecticut.

(1) Affirmative Technical Determinations with Respect to the 1-Hour Ozone Standard in Connecticut. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in the State of Connecticut with respect to the 1-hour NAAQS for ozone if it is or will be:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (c)(2) of this section; and

(iii) Within one of the "Named Source Categories"

listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions covered by the petition of the State of Connecticut.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 1-Hour Ozone Standard in Connecticut. The States, or portions of States, that contain sources of NOx emissions for which EPA is making an affirmative technical determination are:

(i) Delaware.

(ii) District of Columbia.

(iii) Portion of Indiana located in OTAG Subregions 2 and 6, as shown in appendix F, Figure F-2 of this part.

(iv) Portion of Kentucky located in OTAG Subregion 6, as shown in appendix F, Figure F-2 of this part.

(v) Maryland.

(vi) Portion of Michigan located in OTAG Subregion 2, as shown in appendix F, Figure F-2 of this part.

(vii) Portion of North Carolina located in OTAG Subregion 7, as shown in appendix F, Figure F-2 of this part.

(viii) New Jersey.

(ix) Portion of New York extending west and south of Connecticut, as shown in appendix F, Figure F-2 of this part.

(x) Ohio.

(xi) Pennsylvania.

(xii) Virginia.

(xiii) West Virginia.

(d) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in Maine.

(1) Affirmative Technical Determinations with Respect to the 8-Hour Ozone Standard in Maine. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in the State of Maine, with respect to the 8-hour NAAQS for ozone if it is or will be:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (d)(2) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 of appendix F of this part describing the sources of NOx emissions

covered by the petition of the State of Maine.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 8-Hour Ozone Standard in Maine. The States that contain sources for which EPA is making an affirmative technical determination are:

(i) Connecticut.

(ii) Delaware.

(iii) District of Columbia.

(iv) Maryland.

(v) Massachusetts.

(vi) New Jersey.

(vii) New York.

(viii) Pennsylvania.

(ix) Rhode Island.

(x) Virginia.

(e) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in Massachusetts.

(1) Affirmative Technical Determinations with Respect to the 1-Hour Ozone Standard in Massachusetts. The Administrator of EPA finds that any existing major source or group of stationary sources emits NOx in amounts that contribute significantly to nonattainment in the State of Massachusetts, with respect to the 1-

hour NAAQS for ozone if it is:

(i) in a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (e)(2) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions covered by the petition of the State of Massachusetts.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 1-Hour Ozone Standard in Massachusetts. The portion of a State that contains sources for which EPA is making an affirmative technical determination are:

(i) All counties in West Virginia located within a 3-county-wide band of the Ohio River, as shown in appendix F, Figure F-4 of this part.

(3) Affirmative Technical Determinations with Respect to the 8-Hour Ozone Standard in Massachusetts. The Administrator of EPA finds that any existing major source or group of stationary sources emits NOx in amounts that contribute significantly to nonattainment in, or interfere with maintenance by, the State of

Massachusetts, with respect to the 8-hour NAAQS for ozone if it is:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (e)(4) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions covered by the petition of the State of Massachusetts.

(4) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 8-Hour Ozone Standard in Massachusetts. The portions of States that contain sources for which EPA is making an affirmative technical determination are:

(i) All counties in Ohio located within a 3-county-wide band of the Ohio River, as shown in appendix F, Figure F-4 of this part.

(ii) All counties in West Virginia located within a 3-county-wide band of the Ohio River, as shown in appendix F, Figure F-4 of this part.

(f) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in New Hampshire.

(1) Affirmative Technical Determinations with Respect to the 8-Hour Ozone Standard in New Hampshire. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in, or interfere with maintenance by, the State of New Hampshire, with respect to the 8-hour NAAQS for ozone if it is or will be:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (f)(2) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 of appendix F of this part describing the sources of NOx emissions covered by the petition of the State of New Hampshire.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 8-Hour Ozone Standard in New Hampshire. The States that contain sources for which EPA is making an affirmative technical determination are:

(i) Connecticut.

(ii) Delaware.

(iii) District of Columbia.

(iv) Maryland.

(v) Massachusetts.

(vi) New Jersey.

(vii) New York.

(viii) Pennsylvania.

(ix) Rhode Island.

(g) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in the State of New York.

(1) Affirmative Technical Determinations with Respect to the 1-Hour Ozone Standard in the State of New York. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in the State of New York, with respect to the 1-hour NAAQS for ozone:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (g)(2) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions

covered by the petition of the State of New York.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 1-Hour Ozone Standard in the State of New York. The States, or portions of States, that contain sources for which EPA is making an affirmative technical determination are:

(i) Delaware.

(ii) District of Columbia.

(iii) Portion of Indiana located in OTAG Subregions 2 and 6, as shown in appendix F, Figure F-6 of this part.

(iv) Portion of Kentucky located in OTAG Subregion 6, as shown in appendix F, Figure F-6 of this part.

(v) Maryland.

(vi) Portion of Michigan located in OTAG Subregion 2, as shown in appendix F, Figure F-6 of this part.

(vii) Portion of North Carolina located in OTAG Subregions 6 and 7, as shown in appendix F, Figure F-6 of this part.

(viii) New Jersey.

(ix) Ohio.

(x) Pennsylvania.

(xi) Virginia.

(xii) West Virginia.

(h) Affirmative Technical Determinations Relating to Impacts on Ozone Levels in Pennsylvania.

(1) Affirmative Technical Determinations with Respect to the 1-Hour Ozone Standard in Pennsylvania. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in the State of Pennsylvania, with respect to the 1-hour NAAQS for ozone if it is or will be:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (h)(2) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions covered by the petition of the State of Pennsylvania.

(2) States or Portions of States that Contain Sources for which EPA is Making an Affirmative Technical Determination with Respect to the 1-Hour Ozone Standard in Pennsylvania. The States that

contain sources for which EPA is making an affirmative technical determination are:

(i) North Carolina.

(ii) Ohio.

(iii) Virginia.

(iv) West Virginia.

(3) Affirmative Technical Determinations with Respect to the 8-Hour Ozone Standard in Pennsylvania. The Administrator of EPA finds that any existing or new major source or group of stationary sources emits or would emit NOx in amounts that contribute significantly to nonattainment in, or interfere with maintenance by, the State of Pennsylvania, with respect to the 8-hour NAAQS for ozone:

(i) In a category of large EGUs or large non-EGUs;

(ii) Located in one of the States (or portions thereof) listed in paragraph (h)(4) of this section; and

(iii) Within one of the "Named Source Categories" listed in the portion of Table F-1 in appendix F of this part describing the sources of NOx emissions covered by the petition of the State of Pennsylvania.

(4) States or Portions of States that Contain Sources for which EPA is Making an Affirmative

Technical Determination with Respect to the 8-Hour Ozone Standard in Pennsylvania. The States that contain sources for which EPA is making an affirmative technical determination are:

(i) Alabama.

(ii) Illinois.

(iii) Indiana.

(iv) Kentucky.

(v) Michigan.

(vi) Missouri.

(vii) North Carolina.

(viii) Ohio.

(ix) Tennessee.

(x) Virginia.

(xi) West Virginia.

(i) Action on Petitions for Section 126(b) Findings.

(1) For each existing or new major source or group of stationary sources for which the Administrator has made an affirmative technical determination as described in paragraphs (c) through (h) of this section as to impacts on nonattainment or maintenance of a particular NAAQS for ozone in a particular petitioning State, a finding of the Administrator that each such major source or group of stationary sources emits or

would emit NOx in violation of the prohibition of Clean Air Act section 110(a)(2)(D)(i)(I) with respect to nonattainment or maintenance of such standard in such petitioning State will be deemed to be made:

(i) As of November 30, 1999, if by such date EPA does not issue either:

(A) A proposed approval, under section 110(k) of the Clean Air Act, of a State implementation plan revision submitted by such State to comply with the requirements of sections 51.121 and 51.122 of this part; or

(B) A final Federal implementation plan meeting the requirements of those sections for such State.

(ii) As of May 1, 2000, if by November 30, 1999, EPA issues the proposed approval described in paragraph (i)(1)(i) of this section for such State, but, by May 1, 2000, EPA does not fully approve or promulgate implementation plan provisions meeting such requirements for such State.

(2) The making of any such finding as to any such major source or group of stationary sources shall be considered to be the making of a finding under subsection (b) of section 126 of the Clean Air Act as to such major source or group of stationary sources. Each aspect of a petition covering sources in a State

as to which the Administrator has made an affirmative technical determination (as described in paragraphs (c) through (h) of this section) shall be deemed denied as the date of final approval, under section 110(k) of the Clean Air Act, of a State implementation plan revision submitted by such State to comply with the requirements of section 51.121 and 51.122 of this part, or promulgation of a final Federal implementation plan meeting the requirements of those sections for such State. Notwithstanding any other provision of this paragraph or section, after such a finding has been deemed to be made under this paragraph as to a particular major source or group of stationary sources in a particular State, such finding will be deemed to be withdrawn, and the corresponding part of the relevant petition(s) denied, if the Administrator issues a final action putting in place implementation plan provisions that comply with the requirements of sections 51.121 and 51.122 of this part for such State.

(j) Section 126 control remedy. The Federal NOx Budget Trading Program applies to the owner or operator of any new or existing large EGU or large non-EGU as to which the Administrator makes a finding under section 126(b) of the Clean Air Act pursuant to the provisions of paragraph (h) of this section.

(1) Starting May 1, 2003, the owner or operator of any large EGU or large non-EGU in the program must hold total NOx allowances available under the Federal NOx Budget Trading Program to such unit for the ozone season that are not less than the total NOx emissions emitted by the unit during that ozone season.

(2) No later than July 15, 1999, the Administrator will promulgate regulations setting forth the Federal NOx Budget Trading Program, including the allocation and distribution of NOx allowances under the program in accordance with paragraphs (j)(3) and (j)(4) of this section.

(3)(i) The total amount of NOx allowances allocated under the Federal NOx Budget Trading Program will be equivalent to the sum of the following two tonnage limits:

(A) The total ozone season NOx emissions from all large EGUs in the program after achievement of a 0.15 lb/mmBtu NOx emissions rate in the ozone season by every large EGU, assuming adjusted historic ozone season heat input as defined in paragraph (j)(3)(ii) of this section; and

(B) The total ozone season NOx emissions from all large non-EGUs in the program after achievement of a 60 percent reduction in ozone season NOx emissions from

every large non-EGU, assuming adjusted ozone season uncontrolled emissions as defined in paragraph (j)(3)(iii) of this section.

(ii) The adjusted historic ozone season heat input for large EGUs referenced in paragraph (j)(3)(i)(A) of this section will be calculated by:

(A) Determining for each State for each year 1995 and 1996 the total actual ozone season heat input for all EGUs that operated in the State in 1995 or 1996;

(B) Determining for each State whether the total actual ozone season heat input for all EGUs that operated in the State in 1995 or 1996 is greater for 1995 or 1996; and

(C) For all of the large EGUs that operated in a State in 1995 or 1996, taking the actual ozone season heat input for each large EGU for the year determined in paragraph (j)(3)(ii)(B) of this section to have the greater total actual ozone season heat input for the State and adjusting for growth to the year 2007.

(iii) The adjusted ozone season uncontrolled emissions for large non-EGUs referenced in paragraph (j)(3)(i)(B) of this section will be calculated by taking each large non-EGU’s 1995 actual ozone season NOx emissions, increasing the NOx emissions by removing the effect of any NOx controls at the large non-EGU in

1995, and adjusting for growth to the year 2007.

(4)(i) Notwithstanding paragraph (j)(3) of this section, the additional NOx allowances specified in §51.121(e)(3)(iii) of this chapter will be available for distribution under the Federal NOx Budget Trading Program to large EGUs and large non-EGUs in the program that are located within applicable States.

(ii) After the 2004 ozone season, the owner or operator of any large EGU or large non-EGU in the program may not use the additional NOx allowances distributed under paragraph (j)(4)(i) of this section to demonstrate compliance with the provisions of paragraph (j)(1) of this section.

(k)(1) Default section 126 remedy. The provisions of this paragraph will become effective only if:

(i) The Administrator makes a finding under section 126(b) of the Clean Air Act pursuant to the provisions of paragraph (h) of this section with regard to any new or existing large EGU or large non-EGU; and

(ii) The Administrator fails to promulgate regulations setting forth the Federal NOx Budget Trading Program (including the allocation and distribution of NOx allowances under the program in accordance with paragraphs (j)(3) and (j)(4) of this

section) before the Administrator makes the finding described in paragraph(k)(1)(i) of this section.

(2) Starting May 1, 2003, the owner or operator of each large EGU or each large non-EGU as to which the Administrator makes a finding under section 126(b) of the Clean Air Act pursuant to the provisions of paragraph (h) of this section shall control emissions from such unit so that the unit does not emit total NOx emissions during the ozone season in excess of the total NOx allowances allocated to the unit for that ozone season under paragraph (k)(3) of this section.

(3)(i) The Administrator will allocate to each large EGU and large non-EGU in the program an amount of NOx allowances and, for certain units, deduct an amount of NOx allowances, calculated in accordance with paragraphs (k)(3)(ii) through (vii) of this section.

(ii)(A) The heat input (in mmBtu) used for calculating NOx allowance allocations for each large EGU and large non-EGU in the program will be:

(1) For NOx allowance allocations for the 2003, 2004 and 2005 ozone seasons to any large EGU, the average of the two highest amounts of the unit’s actual heat input for the ozone seasons in 1995, 1996, and 1997 and to any large non-EGU, the ozone season in 1995; and

(2) For a NOx allowance allocation for ozone seasons in 2006 and thereafter to any large EGU or large non-EGU, the unit's actual heat input for the ozone season in the year that is four years before the year for which the NOx allocation is being calculated.

(B) The unit's actual heat input for the ozone season in each year specified under paragraph (k)(3)(ii)(A) of this section will be determined in accordance with part 75 of this chapter if the large EGU or large non-EGU was otherwise subject to the requirements of part 75 of this chapter for the ozone season, or will be based on the best available data reported to the Administrator for the unit if the unit was not otherwise subject to the requirements of part 75 of this chapter for the ozone season.

(iii) For each ozone season, the Administrator will allocate to all large EGUs in a State that commenced operation before May 1 of the ozone season used to calculate heat input under paragraph (k)(3)(ii) of this section, a total number of NOx allowances equal to 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large EGUs in the State (as calculated under paragraph (j)(3)(i)(A) of this section) in accordance with the following procedures:

(A) The Administrator will allocate NOx allowances to each large EGU in an amount equaling 0.15 lb/mmBtu multiplied by the heat input determined under paragraph (k)(3)(ii) of this section, rounded to the nearest whole NOx allowance as appropriate.

(B) If the initial total number of NOx allowances allocated to all large EGUs in the State for an ozone season under paragraph (k)(3)(iii)(A) of this section does not equal 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large EGUs in the State (as calculated under paragraph (j)(3)(i)(A) of this section), the Administrator will adjust the total number of NOx allowances allocated to all such large EGUs for the ozone season under paragraph (k)(3)(iii)(A) of this section so that the total number of NOx allowances allocated equals 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of such total ozone season NOx emissions. This adjustment will be made by: multiplying each unit's allocation by 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large EGUs in the State(as calculated under paragraph (j)(3)(i)(A) of this section) divided by the total number of NOx allowances allocated under

paragraph (k)(3)(iii)(A) of this section, and rounding to the nearest whole NOx allowance as appropriate.

(iv) For each ozone season, the Administrator will allocate to all large non-EGUs in a State that commenced operation before May 1 of the ozone season used to calculate heat input under paragraph (k)(3)(ii) of this section, a total number of NOx allowances equal to 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large non-EGUs in the State (as calculated under paragraph (j)(3)(i)(B) of this section) in accordance with the following procedures:

(A) The Administrator will allocate NOx allowances to each large non-EGU in an amount equaling 0.17 lb/mmBtu multiplied by the heat input determined under paragraph (k)(3)(ii) of this section, rounded to the nearest whole NOx allowance as appropriate.

(B) If the initial total number of NOx allowances allocated to all large non-EGUs in the State for an ozone season under paragraph (k)(3)(iv)(A) of this section does not equal 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large non-EGUs in the State (as calculated under paragraph (j)(3)(i)(B) of this section), the Administrator will adjust the total

number of NOx allowances allocated to all such non-EGUs for the ozone season under paragraph (k)(3)(iv)(A) of this section so that the total number of NOx allowances allocated equals 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of such total ozone season NOx emissions. This adjustment will be made by: multiplying each unit's allocation by 95 percent in 2003, 2004, and 2005, or 98 percent thereafter, of the total ozone season NOx emissions from all large non-EGUs (as calculated under paragraph (j)(3)(i)(B) of this section) divided by the total number of NOx allowances allocated under paragraph (k)(3)(iv)(A) of this section, and rounding to the nearest whole NOx allowance as appropriate.

(v) For each ozone season, the Administrator will allocate NOx allowances to large EGUs and large non-EGUs that commenced operation, or are projected to commence operation, in a State on or after May 1 of the ozone season used to calculate heat input under paragraph (k)(3)(ii) of this section, in accordance with the following procedures:

(A) The Administrator will establish one allocation set-aside for each ozone season for the State. Each allocation set-aside will be allocated NOx allowances equal to 5 percent in 2003, 2004, and 2005,

or 2 percent thereafter, of the total ozone season NOx emissions from all large EGUs and large non-EGUs in the State (as calculated under paragraph (j)(3)(i) of this section).

(B) The owner or operator of any large EGU or large non-EGU under paragraph (k)(3)(v) of this section may submit to the Administrator a request, in writing or in a format specified by the Administrator, to be allocated NOx allowances for no more than five consecutive ozone seasons, starting with the ozone season during which the unit commenced, or is projected to commence, operation and ending with the ozone season preceding the ozone season for which it will receive an allocation under paragraph (k)(3)(iii) or (iv) of this section. The NOx allowance allocation request must be submitted prior to May 1 of the first ozone season for which the NOx allowance allocation is requested and after the date on which the State permitting authority issues a permit to construct the large EGU or large non-EGU.

(C) In a NOx allowance allocation request under paragraph (k)(3)(v)(B) of this section, the owner or operator of a large EGU may request for an ozone season NOx allowances in an amount that does not exceed 0.15 lb/mmBtu multiplied by the unit’s maximum design heat

input (in mmBtu/hr) multiplied by the number of hours remaining in the ozone season starting with the first day in the ozone season on which the unit operated or is projected to operate.

(D) In a NOx allowance allocation request under paragraph (k)(3)(v)(B) of this section, the owner or operator of a large non-EGU may request for an ozone season NOx allowances in an amount that does not exceed 0.17 lb/mmBtu multiplied by the unit's maximum design heat input (in mmBtu/hr) multiplied by the number of hours remaining in the ozone season starting with the first day in the ozone season on which the unit operated or is projected to operate.

(E) The Administrator will review, and allocate NOx allowances pursuant to, each NOx allowance allocation request under paragraph (k)(3)(v)(B) of this section in the order that the request is received by the Administrator.

(1) Upon receipt of the NOx allowance allocation request, the Administrator will determine whether, and will make any necessary adjustments to the request to ensure that, for large EGUs, the ozone season and the number of allowances specified are consistent with the requirements of paragraphs (k)(3)(v)(B) and (C) of this section and, for large non-EGUs, the ozone season and

the number of allowances specified are consistent with the requirements of paragraphs (k)(3)(v)(B) and (D) of this section. *(2)* If the allocation set-aside for the ozone season for which NOx allowances are requested has an amount of NOx allowances not less than the number requested (as adjusted under paragraph (k)(3)(v)(E)(1) of this section), the Administrator will allocate the amount of the NOx allowances requested (as adjusted under paragraph (k)(3)(v)(E)(1) of this section) to the large EGU or large non-EGU.

(3) If the allocation set-aside for the ozone season for which NOx allowances are requested has a smaller amount of NOx allowances than the number requested (as adjusted under paragraph (k)(3)(v)(E)(1) of this section), the Administrator will deny in part the request and allocate only the remaining number of NOx allowances in the allocation set-aside to the large EGU or large non-EGU.

(4) Once an allocation set-aside for an ozone season has been depleted of all NOx allowances, the Administrator will deny, and will not allocate any NOx allowances pursuant to, any NOx allowance allocation request under which NOx allowances have not already been allocated for the ozone season.

(F) Within 60 days of receipt of a NOx allowance

allocation request, the Administrator will take appropriate action under paragraph (k)(3)(v)(E) of this section and notify the owner or operator of the large EGU or large non-EGU that submitted the request of the number of NOx allowances (if any) allocated for the ozone season to the large EGU or large non-EGU.

(vi) For a large EGU or large non-EGU that is allocated NOx allowances under paragraph (k)(3)(v) of this section for a control period, the Administrator will deduct NOx allowances to account for the actual utilization of the unit during the ozone season. The Administrator will calculate the number of NOx allowances to be deducted to account for the unit's actual utilization using the following formulas and rounding to the nearest whole NOx allowance as appropriate, provided that the number of NOx allowances to be deducted shall be zero if the number calculated is less than zero:

NOx allowances deducted for actual utilization for a large EGU = (Unit's NOx allowances allocated for ozone season) - (Unit's actual ozone season utilization x 0.15 lb/mmBtu); and

NOx allowances deducted for actual utilization for a large non-EGU = (Unit's NOx allowances allocated for ozone season) - (Unit's actual ozone season

utilization x 0.17 lb/mmBtu),

where:

“Unit’s NOx allowances allocated for ozone season" is the number of NOx allowances allocated to the unit for the ozone season under paragraph (k)(3)(v) of this section; and,

“Unit’s actual ozone season utilization” is the utilization (in mmBtu) of the unit during the ozone season.

(vii) After each ozone season, the Administrator will determine whether any NOx allowances remain in the allocation set-aside for a State for the ozone season. The Administrator will allocate any such NOx allowances to the large EGUs and large non-EGUs in the State using the following formula and rounding to the nearest whole NOx allowance as appropriate:

Unit’s share of NOx allowances remaining in allocation set-aside = Total NOx allowances remaining in allocation set-aside x (Unit’s NOx allowance allocation ÷ Total amount of NOx allowances allocated excluding allocation set-aside)

where:

“Total NOx allowances remaining in allocation set-aside" is the total number of NOx allowances

remaining in the allocation set-aside for the State for the ozone season;

"Unit’s NOx allowance allocation" is the number of NOx allowances allocated under paragraph (k)(3)(iii) or (iv) of this section to the unit for the ozone season to which the allocation set-aside applies; and

"Total amount of NOx allowances allocated excluding allocation set-aside" is the total ozone season NOx emissions from all large EGUs and large non-EGUs in the State (as calculated under paragraph (j)(3)(i)of this section) multiplied by 95 percent if the ozone season is in 2003, 2004, or 2005 or 98 percent if the ozone season is in any year thereafter, rounded to the nearest whole allowance as appropriate.

APPENDIX F--CLEAN AIR ACT SECTION 126 PETITIONS FROM EIGHT NORTHEASTERN STATES: NAMED SOURCE CATEGORIES AND GEOGRAPHIC COVERAGE.

The table and figures in this appendix are cross-referenced in §52.34.

TABLE F-1. Named Source Categories in Section 126 Petitions

Petitioning State	Named Source Categories
Connecticut	Fossil fuel-fired boilers or other indirect heat exchangers with a maximum gross heat input rate of 250 mmBtu/hr or greater and electric utility generating facilities with a rated output of 15 MW or greater.
Maine	Electric utilities and steam-generating units with a heat input capacity of 250 mmBtu/hr or greater.
Massachusetts	Electricity generating plants.
New Hampshire	Fossil fuel-fired indirect heat exchange combustion units and fossil fuel-fired electric generating facilities which emit ten tons of NOx or more per day.
New York	Fossil fuel-fired boilers or indirect heat exchangers with a maximum heat input rate of 250 mmBtu/hr or greater and electric utility generating facilities with a rated output of 15 MW or greater.
Pennsylvania	Fossil fuel-fired indirect heat exchange combustion units with a maximum rated heat input capacity of 250 mmBtu/hr or greater, and fossil fuel-fired electric generating facilities rated at 15 MW or greater.
Rhode Island	Electricity generating plants.

Vermont	Fossil fuel-fired electric utility generating facilities with a maximum gross heat input rate of 250 mmBtu/hr or greater and potentially other unidentified major sources.

[NOTE TO TYPESETTER - INSERT FIGURES F1-F9 HERE]