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**Tuesday,  
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## **Part II**

# **Environmental Protection Agency**

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**40 CFR Part 52**

**Approval and Promulgation of  
Implementation Plans; Illinois, Wisconsin,  
and Indiana, Ozone; Final Rules**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 52**

[IL200-2; FRL-7088-8]

**Approval and Promulgation of Implementation Plans; Illinois; Ozone****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** The EPA is approving State Implementation Plan (SIP) revisions submitted by the State of Illinois to meet certain requirements of the Clean Air Act (CAA) regarding attainment of the ozone standard in the Chicago-Gary-Lake County ozone nonattainment area. These SIP revisions are primarily required by section 182 of the CAA. This action fully approves the following: An ozone attainment demonstration demonstrating attainment by November 15, 2007; a post-1999 ozone Rate-Of-Progress (ROP) plan with associated ROP mobile source conformity emission budgets; a contingency measures plan for both the ozone attainment demonstration and the post-1999 ROP plan; a commitment to conduct a Mid-Course Review (MCR) of the ozone attainment demonstration; motor vehicle emission budgets for Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NO<sub>x</sub>) for the 2007 attainment year, until such time that revised budgets are submitted and found to be adequate for conformity purposes as called for by the State in its commitment to recalculate and apply revised emissions budgets for conformity within two years of the formal release of MOBILE6; and, a demonstration that the State has fully implemented Reasonably Available Control Measures (RACM). The EPA is also revising the existing NO<sub>x</sub> emissions control waiver for the Illinois portion of the Chicago-Gary-Lake County ozone nonattainment area to exclude from the waiver NO<sub>x</sub> emission controls for certain Electrical Generating Units (EGUs), major non-EGU boilers and turbines, and major cement kilns in the ozone nonattainment area relied on by the State to attain the ozone standard, as noted in the State's ozone attainment demonstration. The existing NO<sub>x</sub> emissions control waiver remains in place for Reasonably Available Control Technology (RACT), New Source Review (NSR), and certain requirements of vehicle Inspection and Maintenance (I/M) and transportation and general conformity. The EPA is denying a related citizen petition for the

termination of the NSR portion of the NO<sub>x</sub> waiver.

**EFFECTIVE DATE:** This rule becomes effective on December 13, 2001.

**ADDRESSES:** Copies of the documents relevant to this action are available for public inspection by appointment weekdays from 9 a.m. to 4 p.m. Central Time at the offices of the Air Programs Branch, U.S. Environmental Protection Agency, 77 West Jackson Boulevard, 18th floor, Chicago, Illinois; Air and Radiation Docket and Information Center, U.S. Environmental Protection Agency, Room M-1500, 401 M Street (Mail Code 6102), SW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Edward Doty, Regulation Development Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, Telephone Number: (312) 886-6057, E-mail Address: [doty.edward@epa.gov](mailto:doty.edward@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document whenever "we," "us," or "our" is used, we mean EPA.

This supplementary information section is organized as follows:

- I. What Is EPA Approving Or Disapproving In This Action?
- II. What Previous Action Has Been Taken Or Proposed On This SIP Revision?
- III. What Are The Requirements For Full Approval Of This SIP Revision?
- IV. How Did Illinois Fulfill These Requirements For Full Approval?
- V. What Other SIP Elements Did EPA Need To Approve Before It Could Give Full Approval To This SIP Revision?
- VI. What Comments Were Received On The Proposed Approval Of This SIP Revision, And What Are EPA's Responses To These Comments?
- VII. Final EPA Action
- VIII. Administrative Requirements

**I. What Is EPA Approving or Disapproving in This Action?**

The EPA is approving SIP revisions submitted by the State of Illinois for purposes of attainment of the 1-hour ozone standard in the Chicago-Gary-Lake County ozone nonattainment area (the Illinois portion of which is referred to in this final rule as the "Chicago nonattainment area" or, more simply, as the "Chicago area").<sup>1</sup> These SIP revisions are primarily required by section 182 of the CAA. This action approves the following: (1) An ozone attainment demonstration; (2) a post-

<sup>1</sup> The Chicago nonattainment area is classified as a severe nonattainment for ozone, and is defined in 40 CFR part 81 to include the Counties of Cook, DuPage, Kane, Lake, McHenry, and Will, and the Townships of Aux Sable and Goose Lake in Grundy County and Oswego in Kendall County.

1999 ozone ROP plan with associated ROP conformity emission budgets for 2002 and 2007; (3) a contingency measures plan for both the ozone attainment demonstration and the post-1999 ROP plan; (4) a commitment to conduct a MCR of the ozone attainment demonstration; (5) motor vehicle emission budgets for VOC and NO<sub>x</sub> for the 2007 attainment year, until such time that revised emission budgets are submitted and found to be adequate for conformity purposes as called for by the State in its commitment to recalculate and apply revised emission budgets for conformity within two years of the formal release of MOBILE6; and, (6) a demonstration that the State has fully implemented RACM in the Chicago ozone nonattainment area. These SIP elements are thoroughly described in a July 11, 2001 proposed rule (66 FR 36370).

The attainment emissions control strategy which we are approving in this final rule is summarized in Table I.

TABLE I.—OZONE ATTAINMENT EMISSION CONTROL STRATEGY

- Clean Air Act Title IV Acid Rain Controls for NO<sub>x</sub>—Phase I.
- Rate-Of-Progress Plans (15 Percent ROP Plan and 9 Percent Post-1996 ROP Plan).
- National Low Emission Vehicle Standards.
- Reformulated Gasoline—Phase II (where required).
- Federal Phase II Small Engine Standards.
- Federal Marine Engine Standards.
- Federal Heavy Duty Vehicle (≥ 50 horsepower) Standards—Phase I.
- Federal Locomotive Standards—including Rebuilds.
- Federal High Compression Engine Standards.
- Federal Tier I Light Duty Vehicle and Heavy Duty Vehicle Emission Standards.
- Enhanced Vehicle Inspection and Maintenance (I/M) (where required).
- Basic Vehicle I/M (where required).
- Federal Clean Fuel Fleets Requirements (where required).
- Federal Tier II and Low Sulfur Gasoline Standards.
- Utility 0.15 Pounds NO<sub>x</sub> Per Million Btu of Heat Input Emission Limits (20 affected States, including Illinois).
- 60 Percent Reduction of NO<sub>x</sub> Emissions From Large Non-Electric Generating Unit (Non-EGU) Boilers and Turbines (20 affected States, including Illinois).
- 30 Percent Reduction of NO<sub>x</sub> Emissions From Large Cement Kilns (20 affected States, including Illinois).
- Wisconsin—0.28 Pounds NO<sub>x</sub> Per Million Btu of Heat Input for Utilities (EGUs) in 8 Counties.
- Missouri—0.25 Pounds NO<sub>x</sub> Per Million Btu of Heat Input for EGUs in the Eastern One-Third of the State.

TABLE I.—OZONE ATTAINMENT EMISSION CONTROL STRATEGY—Continued

- Missouri—0.35 Pounds NO<sub>x</sub> Per Million Btu of Heat Input for EGUs in the Western Two-Thirds of the State.

This emissions control strategy has been determined to be adequate to achieve attainment of the 1-hour ozone standard by November 15, 2007, the attainment date EPA is approving for the Chicago nonattainment area.

The post-1999 ROP plan emission control measures are given in Table II and III. Note in Comment/Response 39 below that we are not giving full VOC reduction credit for Transportation Control Measures as stated in Table VIII of our July 11, 2001 proposed rule (66 FR 36370, 36388). VOC and NO<sub>x</sub> emission reduction credits for all other ROP emission control measures are as specified in Table VIII and Table IX in our July 11, 2001 proposed rule.

TABLE II.—CHICAGO NONATTAINMENT AREA VOC EMISSION REDUCTION MEASURES POST-1999 ROP PLAN

- Mobile Source Measures:
- Post-1994 Tier I Vehicle Emission Rates.
  - Federal Reformulated Gasoline—Phase I and II.
  - Illinois 1992 I/M Improvements.
  - Enhanced I/M Program.
  - Conventional Transportation Control Measures.
  - National Energy Policy Act of 1992.
  - Federal Non-Road Small Engine Standards.
  - National Low Emissions Vehicle Program.
  - Federal Clean Fuel Fleet Vehicle Program.
  - Tier II Vehicle Standards/Low Sulfur Fuel Standards.
- Point Source Measures:
- Emissions Reduction Market System (ERMS).
- Area Source Measures:
- 1999 Cold Cleaning Degreaser Limits.

TABLE III.—ILLINOIS OZONE ATTAINMENT AREA NO<sub>x</sub> EMISSION REDUCTION MEASURES POST-1999 ROP PLAN

- CAA Tier I Vehicle Emission Standards.
- Tier II Vehicle Standards/Low Sulfur Fuel Standards.
- National Low Emission Vehicle/Heavy Duty Gasoline Vehicle Standards.
- Federal Off-Road Engine Standards.
- Title IV Acid Rain Controls on EGUs.
- NO<sub>x</sub> SIP Call-based Rules for EGUs, Non-EGU Boilers and Turbines, and Cement Kilns.

These VOC and NO<sub>x</sub> emission control measures have been determined to be adequate to achieve the required ROP by the milestone years (2002, 2005, and 2007) in the Chicago nonattainment area. Note that the plan depends on the substitution of NO<sub>x</sub> emission controls in the attainment portion of Illinois for VOC emission reduction requirements in the Chicago nonattainment area. This substitution is more thoroughly discussed in the July 11, 2001 proposed rule.

For contingency measures, the adopted emission control measures and their associated VOC emission reduction levels in tons per day (TPD), as given in the SIP, are presented in Table IV. These emission reductions are in excess of those emission reductions included in the ozone attainment demonstration, and, therefore, are creditable as contingency measures. These controls are being implemented without the need for future rule development by the State.

TABLE IV.—ILLINOIS CONTINGENCY MEASURE EMISSION REDUCTIONS

Control measure	VOC emission reduction (TPD)
Mobile Source Measures .....	10.8
Tier II/Low Sulfur Fuel Program	1.4
On-Board Diagnostics .....	23.5
Non-Road Engine Standards ...	14.0
Total .....	49.7

We proposed to approve Illinois' Motor Vehicle Emissions Budget (MVEB) for the Chicago nonattainment area in the July 11, 2001 proposed rule (66 FR 36370), and approve the MVEB in this final rule. The VOC emissions budget for 2002 is 183.4 tons per day, and the VOC emissions budget for 2005 is 163.4 tons per day. The emissions budgets for the 2007 attainment year are 154.91 tons per day for VOC and 293.92 tons per day for NO<sub>x</sub>. These emissions budgets were found adequate effective May 31, 2000, as posted on the EPA website at [www.epa.gov/otaq/traq](http://www.epa.gov/otaq/traq) (once there, click on the "conformity" button).

The EPA is revising the existing NO<sub>x</sub> emissions control waiver for the Chicago nonattainment area to exclude from the waiver those NO<sub>x</sub> emission controls for certain EGUs, major non-EGU boilers and turbines, and major cement kilns in the Chicago nonattainment area relied on by the State to attain the ozone standard, as noted in the State's ozone attainment demonstration. The existing NO<sub>x</sub> emissions control waiver remains in place for RACT, NSR, and certain

requirements of vehicle I/M and transportation and general conformity. The EPA is denying a related citizen petition for the termination of the NSR portion of the NO<sub>x</sub> waiver.

The basis for the NO<sub>x</sub> waiver, as retained, is revised from that used in the original approval of the NO<sub>x</sub> waiver.<sup>2</sup> Originally the NO<sub>x</sub> waiver was based on a demonstration that NO<sub>x</sub> emission controls in the Chicago nonattainment area are not beneficial toward the attainment of the ozone standard in this area, complying with the waiver criteria based on section 182(f)(1)(A) of the CAA. The revised basis is based on section 182(f)(2)(A) of the CAA, which provides for a waiver of excess NO<sub>x</sub> emission reductions. The State has demonstrated attainment of the 1-hour ozone standard without application of the waived NO<sub>x</sub> emission controls.

Today's action finalizes EPA's approval of Illinois' 1-hour ozone attainment demonstration and post-1999 ROP SIP revisions as meeting the requirements of sections 182(c)(2) and (d) of the CAA.

**II. What Previous Action Has Been Taken or Proposed on This SIP Revision?**

EPA published a Notice of Proposed Rulemaking (NPR) for the Illinois ozone attainment demonstration SIP for the Chicago-Gary-Lake County ozone nonattainment area on December 16, 1999 (64 FR 70496). In that NPR, we proposed to conditionally approve the 1-hour ozone attainment demonstration SIP revision submitted by Illinois on April 30, 1998. This proposed conditional approval was based on the State's submitted ozone modeling analysis and the State's commitment to adopt and submit a final ozone attainment demonstration and a post-1999 ROP plan, including the necessary State air pollution control regulations, by December 31, 2000. We proposed, in the alternative, to disapprove this attainment demonstration plan, if, by December 31, 1999, the State did not select an emissions control strategy associated with its submitted ozone modeling analysis and did not submit adequate motor vehicle emissions budgets for VOC and NO<sub>x</sub> for the Chicago nonattainment area that complied with EPA's conformity

<sup>2</sup> The EPA approved Illinois' original NO<sub>x</sub> waiver petition in a final rule on January 26, 1996 (61 FR 2428), covering a waiver from NO<sub>x</sub> emission control requirements for RACT, NSR, and certain I/M and general conformity NO<sub>x</sub> requirements for the Chicago nonattainment area. The EPA also granted an exemption from certain transportation conformity NO<sub>x</sub> requirements for the Chicago nonattainment area on February 12, 1996 (61 FR 5291).

regulations and that supported the attainment of the 1-hour ozone standard. We also required the State to submit, by December 31, 1999, an enforceable commitment to conduct a mid-course review of the ozone attainment plan in 2003.

The State met the submittal requirements of the proposed conditional approval, and submitted a final ozone attainment demonstration and post-1999 ROP plan on December 26, 2000. We reviewed this submittal, along with a related citizens petition requesting removal of the NSR portion of the existing NO<sub>x</sub> emissions control waiver for the Chicago ozone nonattainment area, in a NPR on July 11, 2001 (66 36370). In this NPR, we proposed to approve the State's submittal and to deny the citizen's NO<sub>x</sub> waiver petition.

Since the State largely replaced the April 30, 1998 ozone attainment demonstration with the December 26, 2000 submittal, the July 11, 2001 NPR primarily focused on the December 2000 ozone attainment demonstration. As such, this final rule also focuses on the December 26, 2000 version of the ozone attainment demonstration and the comments received on our July 11, 2001 NPF. This Notice of Final Rulemaking (NFR), however, also addresses the public comments received with regard to our December 16, 1999 NPR.

### III. What Are the Requirements for Full Approval of This SIP Revision?

The ozone attainment demonstration and post-1999 ROP plan must meet applicable criteria as detailed in the CAA. The specific requirements of the CAA for ozone attainment demonstrations and post-1996 ROP plans in serious and severe ozone nonattainment areas are specified in sections 182(c)(2) and 182(d) of the CAA. Section 172 of the CAA provides the general requirements for air quality plans for nonattainment areas. Refer to our July 11, 2001 NPR for further details of requirements for ozone attainment demonstrations and ROP plans.

### IV. How Did Illinois Fulfill the Requirements for Full Approval?

On December 26, 2000, as noted elsewhere in this final rule, the State of Illinois submitted a SIP revision covering the State's adopted ozone attainment demonstration, post-1999 ROP plan, associated motor vehicle emission budgets, and adopted emissions control strategy. This submittal, along with the submittal of adopted NO<sub>x</sub> emission control regulations as discussed below, meets the requirements of the CAA for

submission of attainment demonstrations and ROP plans.

### V. What Other SIP Elements Did EPA Need To Approve Before It Could Give Full Approval to This SIP Revision?

This SIP revision depends significantly on the new NO<sub>x</sub> emission reductions resulting from the implementation of NO<sub>x</sub> emission control regulations for major EGUs, major non-EGU boilers and turbines, and major cement kilns. On September 25, 2001, EPA signed final rules approving Illinois' NO<sub>x</sub> emission control regulations for major EGUs, major non-EGU boilers and turbines, and major cement kilns. These final rules are being published in separate rulemaking actions. In addition, other State emission control regulations affecting the attainment of the ozone standard and post-1999 ROP in the Chicago ozone nonattainment area—such as VOC RACT, I/M, and Illinois' Emission Reduction Market System, with an associated VOC emissions cap for stationary sources—have previously been adopted by the State and approved by the EPA.

All required State emission control regulations and related SIP elements needed to support the ozone attainment demonstration and the post-1999 ROP plan have been approved by the EPA.

Other related SIP actions are being acted upon in this final notice. These include Illinois' commitments to conduct a Mid-Course Review in 2004 and to recalculate the mobile vehicle transportation conformity emission budgets within two years after MOBILE6 is officially released. Illinois committed to revise within two years after the official release of MOBILE6, the 2007 attainment demonstration emission budgets and to revise the ROP conformity emission budgets. No conformity determinations can be made in the second year of the commitment without adequate MOBILE6-based emissions budgets. As we proposed on July 28, 2000 (65 FR 46383), the final approval action we are taking today on the 2007 attainment demonstration emission budgets will be effective for conformity purposes only until revised motor vehicle emissions budgets are submitted and we have found them to be adequate. In other words, the emissions budgets we are approving today as part of the attainment demonstration and the post-1999 ROP plan will apply for conformity purposes only until there are new, adequate emissions budgets consistent with the States commitments to revise the emissions budgets. The revised emissions budgets will apply for

conformity purposes as soon as we find them adequate.

We are limiting the duration of the approval of the motor vehicle emissions budgets in this manner because the State has committed to revise them. Therefore, once we have confirmed that the revised motor vehicle emissions budgets are adequate, they will be more appropriate than the emissions budgets we are approving for conformity purposes now. If the revised motor vehicle emissions budgets raise issues about the sufficiency of the attainment demonstration or post-1999 ROP plan, EPA will work with the State on a case-by-case basis.

The Mid-Course Review commitment and MOBILE6-based revision commitment were discussed in detail in the July 11, 2001 proposed rule. In today's action, EPA is approving these State commitments.

### VI. What Comments Were Received on the Proposed Approval of These SIP Revisions, and What Are EPA's Response to These Comments?

As noted above, we issued two NPRs, dated December 16, 1999 (64 FR 70496) and July 11, 2001 (66 FR 36370), related to the SIP revisions addressed in this final rule. We received comments on both of these NPRs. The following summarizes and addresses those comments.

#### *Comment 1*

A commenter opposes the proposed approval of the Chicago ozone attainment demonstration because the State of Illinois has not adopted an emissions control strategy. The commenter also stated that the MVEB is by definition inadequate because the SIP does not demonstrate timely attainment of the ozone standard nor does it include the emissions reductions required for all RACM. The commenter claims that EPA may not find as adequate a MVEB that is derived from a SIP that is inadequate for the purpose for which it is submitted.

#### *Response 1*

With regard to the adoption of an ozone attainment demonstration, as noted in the July 11, 2001 proposed rule (66 FR 36370), this problem has been resolved. The State has completed the adoption of the ozone attainment demonstration and its associated emissions control strategy. The State has revised its MVEB to reflect the adopted ozone attainment demonstration. It is also noted that the SIP does now demonstrate timely attainment of the 1-hour ozone standard by the November 15, 2007 deadline for the Chicago-Gary-

Lake County ozone nonattainment area as noted in the July 11, 2001 proposed rule.

The EPA reviewed the initial Illinois SIP submittal (the April 30, 1998 submittal) for the Chicago-Gary-Lake County ozone nonattainment area and determined that it did not include sufficient documentation concerning available RACM measures. For all of the severe nonattainment areas for which EPA proposed approvals in December 1999, EPA consequently issued a policy guidance memorandum<sup>3</sup> to have these States address the RACM requirements through an additional SIP submittal. (Memorandum of December 14, 2000, from John S. Seitz, Director, Office of Air Quality Planning and Standards, regarding: "Additional Submission on RACM from States with Severe 1-hour Ozone Nonattainment Area SIP.")

We conducted a review of Illinois' December 2000 submittal to determine whether it demonstrated that Illinois had implemented RACM in the Chicago nonattainment area. As noted in the July 11, 2001 proposed rule (66 FR 36370), we have proposed to approve the December 2000 submittal as demonstrating that Illinois has implemented RACM in the Chicago nonattainment area.

Section 172(c)(1) of the CAA requires SIPs to contain RACM and provides for areas to attain as expeditiously as practicable. EPA has previously provided guidance interpreting the requirements of section 172(c)(1). See 57 FR 13498, 13560. In that guidance, EPA indicated its interpretation of section 172(c)(1) that potentially available measures that would not advance the attainment date for an area would not be considered to be RACM. EPA also indicated in that guidance that States should consider all potentially available emission control measures to determine whether they are potentially available for implementation in an area and whether they would advance the attainment date. Further, States should indicate in their SIPs whether emission control measures considered were reasonably available or not, and, if measures are reasonably available, they must be adopted by the States as RACM. Finally, EPA indicated that States could reject emission control measures as not being RACM because they would cause substantial widespread and long-term adverse impacts, or would be economically or technologically infeasible. The EPA also issued a recent

memorandum re-confirming the principles in the earlier guidance. The newer memorandum is titled, "Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas," from John S. Seitz, Director, Office of Air Quality Planning and Standards (OAQPS). November 30, 1999. Web site: <http://www.epa.gov/ttn/oarpg/tlpgm.html>.

As noted in the July 11, 2001 proposed rule (66 FR 36370, 36398), the State's SIP has addressed the implementation of RACM, and we have determined that the SIP adequately meets the RACM requirements of the CAA. We addressed the implementation of emission control measures in the Chicago area for both mobile and stationary sources. We determined that the State could not significantly advance the 1-hour ozone standard attainment date through the implementation of emission controls not already adopted by the State. In addition, as we noted in the July 11, 2001 proposed rule (66 FR 36370, 36400), although we encourage areas to implement available RACM as potentially cost-effective methods to achieve emission reductions in the short term, we do not believe that section 172(c)(1) of the CAA requires implementation of potential RACM measures that either needlessly require costly implementation efforts or produce relatively small emissions reductions that will not be sufficient to allow an area to achieve attainment in advance of full implementation of all other required measures.

In addition to emission control measures already implemented locally, Illinois relies in large part on emission reductions from outside of the Chicago area resulting from EPA's NO<sub>x</sub> SIP Call rule or section 126 NO<sub>x</sub> rule (65 FR 2674, January 18, 2000) to reach attainment of the ozone standard. In the NO<sub>x</sub> SIP Call (63 FR 57356), we concluded that NO<sub>x</sub> emission reductions from various upwind States were necessary to provide for timely attainment of the 1-hour ozone standard in nonattainment areas in various downwind States, including Illinois on both counts. The NO<sub>x</sub> SIP Call established requirements for control of sources of significant NO<sub>x</sub> emissions in the relevant upwind States. These NO<sub>x</sub> emission reductions are not expected to be fully implemented until May 2004.

The ozone attainment demonstration for Illinois indicates that the ozone reduction benefit expected to be achieved from the regional NO<sub>x</sub> emission reductions is significant. We

have seen no evidence for similar ozone benefits resulting from Illinois-specific emission controls not already adopted by the State that would also significantly advance the attainment date for the Chicago-Gary-Lake County ozone nonattainment area. Therefore, EPA concludes, based on the available documentation, that the emission reductions from additional emission control measures will not advance attainment, and, thus, none of the possible additional emission control measure can be considered to be RACM for the purposes of section 172(c)(1) of the CCA.

Although EPA does not believe that section 172(c)(1) requires implementation of additional measures for the Chicago nonattainment area, this conclusion is not necessarily valid for other areas. Thus, a determination of RACM is necessary on a case-by-case basis and will depend on the circumstances for the individual area. In addition, if in the future EPA moves forward to implement another ozone standard, this RACM analysis would not control what is RACM for these or any other areas for that other ozone standard.

EPA has also long advocated that States consider the kinds of emission control measures that the commenters have suggested, and EPA has indeed provided guidance on those measures. See, e.g., <http://www.epa.gov/otaq/transp.htm>. In order to demonstrate that they will attain the 1-hour ozone NAAQS as expeditiously as practicable, some areas may need to consider and adopt a number of emission control measures—including the kind that Illinois itself evaluated in its RACM analysis—that even collectively do not result in many emission reductions. Furthermore, EPA encourages areas to implement technically available and economically feasible measures to achieve emissions reductions in the short term—even if such measures do not advance the attainment date—since such measures will likely improve air quality. Also, over time, emission control measures that may not be RACM now for an area may ultimately become feasible for the same area due to advances in control technology or more cost-effective implementation techniques. Thus, areas should continue to assess the state of control technology as they make progress toward attainment and consider new control technologies that may in fact result in more expeditious improvement in air quality.

We previously responded to comments concerning the adequacy of Illinois' MVEB when we took final

<sup>3</sup>Memorandum of December 14, 2000 from John S. Seitz, Director, Office of Air Quality Planning and Standards, Subject: "Additional Submission on RACM from States with Severe 1-hour Ozone Nonattainment SIPs."

action determining the MVEB to be adequate and do not address those issues again here. Our findings of adequacy for the MVEB and responses to comments can be accessed at [www.epa.gov/otaq/traq](http://www.epa.gov/otaq/traq) (once there, click on the "conformity" button).

#### *Comment 2*

A commenter notes that EPA has been working toward promulgation of a revised 8-hour ozone National Ambient Air Quality Standard (NAAQS) because the Administrator deemed attaining the 1-hour ozone NAAQS is not adequate to protect public health. Therefore, EPA must ensure that measures be implemented now that will be sufficient to meet the 1-hour standard and that make as much progress toward implementing the 8-hour ozone standard as the requirements of the CAA and implementing regulations allow.

#### *Response 2*

The 1-hour standard remains in effect for all of 1-hour ozone nonattainment areas, and the SIPs that have been submitted are for the purpose of achieving that NAAQS. Congress has provided the States with the authority to choose the measures necessary to attain the NAAQS and EPA cannot second guess the States' choice if it determines that the SIPs meet the requirements of the CAA. EPA believes that the SIPs for the severe areas meet the requirements for attainment demonstrations for the 1-hour standard and thus, could not disapprove them even if EPA believed other emission controls might be more effective for attaining the 8-hour ozone standard. EPA, however, generally believes that emission controls implemented to attain the 1-hour ozone standard will be beneficial toward attainment of the 8-hour ozone standard as well. This is particularly true regarding the implementation of NO<sub>x</sub> emission controls resulting from EPA's NO<sub>x</sub> SIP Call.

Finally, EPA notes that although the 8-hour ozone standard has been adopted by the EPA, implementation of the standard has been delayed while certain aspects of the standard remain before the United States Circuit Court of Appeals. The States and EPA have yet to define the 8-hour ozone nonattainment areas and the EPA has yet to issue guidance and requirements for the implementation of the 8-hour ozone standard.

#### *Comment 3*

A commenter asks that EPA require full compliance with regulatory requirements now in place that govern the development of attainment

strategies, and rigorous implementation of statutory requirements for RACT and RACM.

#### *Response 3*

As noted in responses to other comments in this final rule and in the July 11, 2001 (66 FR 36370) NPR, the Illinois SIP meets the CAA requirements for the implementation of RACM. In addition, it is noted that the State of Illinois has implemented RACT controls for VOC sources in the ozone nonattainment areas in Illinois in full compliance with CAA requirements. As noted elsewhere in this final rule and in the July 11, 2001 proposed rule, the Chicago nonattainment area is currently covered by a waiver from NO<sub>x</sub> RACT controls.

Given the above, it is concluded that Illinois has met the requirements for RACT and RACM as requested by the commenter.

#### *Comment 4*

A commenter urges EPA to reject the dilatory approaches embodied in the proposed approvals, and to instead disapprove the SIP revisions until they demonstrate, using the approved Urban Airshed Model (UAM), that the areas will attain the 1-hour standard at the earliest possible date.

#### *Response 4*

As noted in the July 11, 2001 NPR (66 FR 36370), Illinois has demonstrated attainment of the 1-hour ozone standard using the UAM. Illinois used UAM data and a statistical approach, as defined in EPA's June 1996 Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS (EPA-454/B-95-007), to demonstrate attainment of the 1-hour ozone standard in the Chicago nonattainment area by November 15, 2007.

The commenter is objecting to States demonstrating attainment of the 1-hour ozone standard via procedures differing from the deterministic test as discussed in the June 1996 guidance. However, as discussed in more detail in the June 1996 guidance and elsewhere in this final rule, the deterministic test is not the only attainment demonstration test supported by the attainment demonstration requirements of the CAA. The CAA is not prescriptive as to the specific nature of the attainment demonstration, other than that the use of a photochemical dispersion model, such as UAM, is required for serious and above ozone nonattainment areas. The CAA does not prevent the consideration of additional data to support the attainment demonstration. In addition, the EPA has found that the

simple use of the photochemical dispersion model through only the deterministic test may not be appropriate for some areas.

See the next comment and our response to that comment.

#### *Comment 5*

A commenter states that none of the air quality plans for severe ozone nonattainment areas demonstrate attainment in the manner required by section 182(c)(2)(A) of the CAA. Each State's photochemical grid modeling clearly predicts continued nonattainment of the 1-hour ozone standard, with predicted ozone peak concentrations well above the NAAQS. The Weight-Of-Evidence (WOE) approach does not satisfy the CAA's mandate to assure attainment of the ozone standard by the deadline, nor does it comply with the requirement of a modeled demonstration of attainment. EPA may not lawfully approve SIPs based on modeling that has been expressly prohibited by the rule.

Note that a number of commenters made related comments on the ozone attainment demonstrations (including those from states other than Illinois) reviewed in the December 16, 1999 proposed rules. These related comments are also addressed here.

#### *Response 5*

Under section 182(c)(2) and (d) of the CAA, serious and severe ozone nonattainment areas were required to submit by November 15, 1994, demonstrations of how they would attain the 1-hour ozone standard. Section 182(c)(2)(A) of the CAA provides that "[t]his attainment demonstration must be based on photochemical grid modeling or any other analytical method determined by the Administrator, in the Administrator's discretion, to be at least as effective." As described in more detail below, the EPA allows states to supplement their photochemical modeling results, with additional evidence designed to account for uncertainties in the photochemical modeling, to demonstrate attainment. This approach is consistent with the requirement of section 182(c)(2)(A) of the CAA that the attainment demonstration "be based on photochemical grid modeling," because the modeling results constitute the principal component of EPA's analysis, with supplemental information designed to account for uncertainties in the model. This interpretation and application of the photochemical modeling requirement of section 182(c)(2)(A) finds further justification in

the broad deference Congress granted EPA to develop appropriate methods for determining attainment, as indicated in the last phrase of section 182(c)(2)(A).

The flexibility granted to EPA under section 182(c)(2)(A) of the CAA is reflected in the regulations EPA promulgated for modeled attainment demonstrations. These regulations provide, "The adequacy of a control strategy shall be demonstrated by means of applicable air quality models, data bases, and other requirements specified in [40 CFR part 51 Appendix W] (Guideline on Air Quality Models)."<sup>4</sup> 40 CFR 51.112(a)(1). However, the regulations further provide, "Where an air quality model specified in appendix W \* \* \* is inappropriate, the model may be modified or another model substituted [with approval by EPA, and after] notice and opportunity for public comment \* \* \*." Appendix W, in turn, provides that, "The Urban Airshed Model (UAM) is recommended for photochemical or reactive pollutant modeling applications involving entire urban areas," but further refers to EPA's modeling guidance for data requirements and procedures for operating the model. 40 CFR 51 App. W section 6.2.1.a. The modeling guidance discusses the data requirements and operating procedures, as well as interpretation of model results as they relate to the attainment demonstration. This provision references guidance published in 1991, but EPA envisioned the guidance would change as we gained experience with model applications, which is why the guidance is referenced, but does not appear, in Appendix W. With updates in 1996 and 1999, the evolution of EPA's guidance has led us to use both the photochemical grid model, and additional analytical methods approved by EPA.

The modeled attainment test compares model predicted 1-hour daily maximum ozone concentrations in all grid cells for the attainment year to the level of the NAAQS. The results may be interpreted through either of two modeled attainment or exceedance tests: The deterministic test or the statistical test. Under the deterministic test, a predicted (attainment year, 2007 for the Chicago nonattainment area) 1-hour ozone concentration above 0.124 parts per million (ppm) indicates that the area is expected to exceed the standard in the attainment year and a prediction at

or below 0.124 ppm indicates that the area is expected to not exceed the standard. Under the statistical test, attainment is demonstrated when all predicted (i.e., modeled) 1-hour ozone concentrations inside the modeling domain are at, or below, an acceptable upper limit above the NAAQS permitted under certain conditions (depending on the severity of the episode modeled).<sup>5</sup>

In 1996, EPA issued guidance<sup>6</sup> to update the 1991 guidance referenced in 40 CFR 50 App. W, to make the modeled attainment test more closely reflect the form of the NAAQS (i.e., the statistical test described above), to consider the area's ozone design value and the meteorological conditions accompanying observed exceedances, and to allow consideration of other evidence to address uncertainties in the modeling databases and application. When the modeling does not conclusively demonstrate attainment, EPA has concluded that additional analyses may be presented to help determine whether the area will attain the standard. As with other predictive tools, there are inherent uncertainties associated with air quality modeling and its results. The inherent imprecision of the model means that it may be inappropriate to view the specific numerical result of the model as the only determinant of whether the SIP controls are likely to lead to attainment. The EPA's guidance recognizes these limitations, and provides a means for considering other evidence to help assess whether attainment of the NAAQS is likely to be achieved. The process by which this is done is called a Weight-Of-Evidence (WOE) determination. Under a WOE determination, the state can rely on, and EPA will consider in addition to the results of the modeled attainment test, other factors such as other modeled output (e.g., changes in the predicted frequency and pervasiveness of 1-hour ozone NAAQS exceedances, and predicted change in the ozone design value); actual observed air quality trends (i.e., analyses of monitored air quality data); estimated emissions trends; and the responsiveness of the model predictions to further emission controls.

In 1999, EPA issued additional guidance<sup>7</sup> that makes further use of

<sup>5</sup> Guidance on the Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS. EPA-454/B-95-007, June 1996.

<sup>6</sup> Ibid.

<sup>7</sup> "Guidance for Improving Weight of Evidence Through Identification of Additional Emission Reductions, Not Modeled." U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Emissions, Monitoring, and

model results for base case and future emission estimates to predict a future design value. This guidance describes the use of an additional component of the WOE determination, which requires, under certain circumstances, additional emission reductions that are or will be approved into the SIP, but that were not included in the modeling analysis, that will further reduce the modeled ozone design value. An area is considered to monitor attainment if each monitor site has air quality observed ozone design values (4th highest daily maximum ozone using the three most recent consecutive years of data) at or below the level of the standard. Therefore, it is appropriate for EPA, when making a determination that a control strategy will provide for attainment, to determine whether or not the model predicted future design value is expected to be at or below the level of the standard. Since the form of the 1-hour NAAQS allows exceedances, it did not seem appropriate for EPA to require the test for attainment to be "no exceedances" in the future model predictions. The method outlined in EPA's 1999 guidance uses the highest measured design value across all sites in the nonattainment area for each of three years. These three "design values" represent the air quality observed during the time period used to predict ozone for the base emissions. This is appropriate because the model predicts the change in ozone from the base period to the future attainment date. The three yearly design values (highest across the area) are averaged to account for annual fluctuations in meteorology. The result is an estimate of an area's base year design value. The base year design value is multiplied by a ratio of the peak model predicted ozone concentrations in the attainment year (i.e., average of daily maximum concentrations from all days modeled) to the peak model predicted ozone concentrations in the base year (i.e., average of daily maximum concentrations from all days modeled). The result is an attainment year design value based on the relative change in peak model predicted ozone concentrations from the base year to the attainment year. Modeling results also show that emission control strategies designed to reduce areas of peak ozone concentrations generally result in similar ozone reductions in all core areas of the modeling domain, thereby

Analysis Division, Air Quality Modeling Group, Research Triangle Park, NC 27711. November 1999. Web site: <http://www.epa.gov/ttn/scrpm>.

<sup>4</sup> The August 12, 1996 version of "Appendix W to Part 51—Guideline on Air Quality Models" was the rule in effect for these attainment demonstrations. EPA is proposing updates to this rule, that will not take effect until the rulemaking process for them is complete.

providing some assurance of attainment at all monitors.

In the event that the attainment year design value is above the standard, the 1999 guidance provides a method for identifying additional emission reductions, not modeled, which at a minimum provide an estimated attainment year design value at the level of the standard. This step uses a locally derived factor which assumes a linear relationship between ozone and the precursors.

A commenter on our December 1999 proposed ozone rules criticized the 1999 guidance as flawed on grounds that it allows the averaging of the three highest air quality sites across a region, whereas EPA's 1991 and 1996 modeling guidance requires that attainment be demonstrated at each site. This has the effect of allowing lower air quality concentrations to be averaged against higher concentrations thus reducing the total emission reduction needed to attain at the higher site. The commenter does not appear to have described the guidance accurately. The guidance does not recommend averaging across a region or spatial averaging of observed data. The guidance does recommend determination of the highest site in the region for each of the three-year periods, determined by the base year modeled.

For example, if the base year is 1990, it is the amount of emissions in 1990 that must be adjusted or evaluated (by accounting for growth and controls) to determine whether attainment results. These 1990 emissions contributed to three ozone design value periods (1988–90, 1989–91 and 1990–92). Under the approach of the guidance document, EPA determined the design value for each of those three-year periods, and then averaged those three design values, to determine the area's base ozone design value. This approach is appropriate because, as just noted, the 1990 emissions contributed to each of those periods, and there is no reason to believe the 1990 (episodic) emissions resulted in the highest or lowest of the three design values. Averaging the three years is beneficial for another reason: It allows consideration of a broader range of meteorological conditions—those that occurred throughout the 1988–1992 period, rather than the meteorology that occurs in one particular year or even one particular ozone episode within that year. Furthermore, EPA relied on three-year averaging only for purposes of determining one component, i.e.—the small amount of additional emission reductions not modeled—of the WOE determination. The WOE determination, in turn, is intended to be part of a qualitative assessment of whether

additional factors (including the additional emissions reductions not modeled), taken as a whole, indicate that the area is more likely than not to attain.

A commenter on our December 1999 proposed ozone rules criticized the component of this WOE factor that estimates ambient improvement because it does not incorporate complete modeling of the additional emissions reductions. However, the regulations do not mandate, nor does EPA guidance suggest, that States must model all control measures being implemented. Moreover, a component of this technique—the estimation of the future ozone design value—should be considered a model predicted estimate. Therefore, results from this technique are an extension of “photochemical grid” modeling and are consistent with Section 182(c)(2)(A). Also, a commenter believes EPA has not provided sufficient opportunity to evaluate the calculations used to estimate additional emission reductions. EPA provided a full 60-day period for comment on all aspects of the proposed rules. EPA has received several comments on the technical aspects of the approach and the results of its application, as discussed above and in the responses to the individual SIPs.

A commenter states that application of the method of attainment analysis in the December 16, 1999 guidance will yield a lower control estimate than if we relied entirely on reducing maximum predictions in every grid cell to less than or equal to 124 ppb on every modeled day. However, the commenter's approach may overestimate needed emission controls because the form of the standard allows up to 3 exceedances in 3 years at every monitoring site, and, therefore, in every grid cell. If the model over-predicts observed concentrations, predicted controls may be further overestimated. EPA has considered other evidence, as described above through the weight of evidence determination.

When reviewing a SIP, the EPA must make a determination that the control measures adopted are reasonably likely to lead to attainment. Reliance on the WOE factors allows EPA to make this determination based on a greater body of information presented by the States and available to EPA. EPA's decision was further strengthened by each State's commitment to check progress towards attainment in a mid-course review and to adopt additional measures, if the anticipated progress is not being made.

A commenter further criticized EPA's technique for estimating the ambient impact of additional emissions

reductions not modeled on grounds that EPA employed a rollback modeling technique that, according to the commenter, is precluded under EPA regulations. The commenter explained that 40 CFR 51 App. W section 6.2.1.e. provides, “Proportional (rollback/forward) modeling is not an acceptable procedure for evaluating ozone control strategies.” Section 14.0 of appendix W defines “rollback” as “a simple model that assumes that if emissions from each source affecting a given receptor are decreased by the same percentage, ambient air quality concentrations decrease proportionately.” Under this approach if 20 percent improvement in ozone is needed for the area to reach attainment, it is assumed a 20 percent reduction in VOC emissions would be required. There was no approach for identifying NO<sub>x</sub> reductions. The “proportional rollback” approach is based on a purely empirically/mathematically derived relationship. EPA did not rely on this approach in its evaluation of the attainment demonstrations. The prohibition in Appendix W applies to the use of a rollback method which is empirically/mathematically derived and independent of model estimates or observed air quality and emissions changes as the sole method for evaluating control strategies. For the demonstrations under proposal, EPA used a locally derived (as determined by the model and/or observed changes in air quality) ratio of change in emissions to change in ozone to estimate additional emission reductions to achieve an additional increment of ambient improvement in ozone. For example, if monitoring or modeling results indicate that ozone was reduced by 25 ppb during a particular period, and that VOC and NO<sub>x</sub> emissions fell by 20 tons per day and 10 tons per day respectively during that period, EPA developed a ratio of ozone improvement related to reductions in VOC and NO<sub>x</sub>. This formula assumes a linear relationship between the precursors and ozone for a small amount of ozone improvement, but it is not a “proportional rollback” technique. Further, EPA uses these locally derived adjustment factors as a component to estimate the extent to which additional emissions reductions<sup>8</sup>—not the core control strategies—would reduce ozone levels and thereby strengthen the weight of evidence test. EPA uses the UAM to evaluate the core control strategies. This

<sup>8</sup>Not applicable to the Chicago area ozone attainment demonstration addressed in this final rule, but applicable for other ozone nonattainment areas for which EPA is also publishing final rules.



limited use of adjustment factors is more technically sound than the unacceptable use of proportional rollback to determine the ambient impact of the entire set of emissions reductions required under the attainment SIP. The limited use of adjustment factors is acceptable for practical reasons: it obviates the need to expend more time and resources to perform additional modeling. In addition, the adjustment factor is a locally derived relationship between ozone and its precursors based on air quality observations and/or modeling which is more consistent with recommendations referenced to in Appendix W and does not assume a direct proportional relationship between ozone and its precursors. In addition, the requirement that areas perform a mid-course review (a check of progress toward attainment) provides a margin of safety.

A commenter expressed concerns that EPA used a modeling technique (proportional rollback) that was expressly prohibited by 40 CFR part 51 Appendix W without expressly proposing to do so in a notice of proposed rulemaking. However, the commenter is mistaken. As explained above, EPA did not use or rely on a proportional rollback technique in the relevant rulemaking<sup>9</sup> but used UAM to evaluate the core control strategies and then applied its WOE guidance. Therefore, because EPA did not use an "alternative model" to UAM, it did not trigger an obligation to modify Appendix W. Furthermore, EPA did propose to use the November 1999 guidance, "Guidance for Improving Weight of Evidence Through Identification of Additional Emission Reductions, Not Modeled," in the December 16, 1999 NPR and has responded to all comments received on that guidance elsewhere in this final rule.

A commenter also expressed concern that EPA applied unacceptably broad discretion in fashioning and applying the WOE determinations. For all of the attainment submittals proposed for approval in December 1999 concerning serious and severe ozone nonattainment areas, EPA first reviewed the UAM results. In all cases, the UAM results did not pass the deterministic test. In two

cases—Milwaukee and Chicago—the UAM results passed the statistical test; in the rest of the cases, the UAM results failed the statistical test. The UAM has inherent limitations that, in EPA's view, were manifest in all these cases. These limitations include: Only selected time periods were modeled, not the entire three-year period used as the definitive means for determining an area's attainment status. Also, there are inherent uncertainties in the model formulation and model inputs such as hourly emission estimates, emissions growth projections, biogenic emission estimates, and derived wind speeds and directions. As a result, for all areas, even Milwaukee and Chicago, EPA examined additional analyses to indicate whether additional SIP controls would yield meaningful reductions in ozone values. These analyses did not point to the need for additional emission reductions for Springfield, Greater Connecticut, Metropolitan Washington DC, Chicago and Milwaukee, but did point to the need for additional reductions, in varying amounts, in the other areas. As a result, the other areas submitted control requirements to provide the indicated level of emissions reductions. EPA applied the same methodology in these areas, but because of differences in the application of the model to the circumstances of each individual area, the results differed on a case-by-case basis.

As another WOE factor, for areas within the NO<sub>x</sub> SIP Call domain, results from the EPA regional modeling for NO<sub>x</sub> controls as well as the Tier2/Low Sulfur program were considered. Also, for all of the areas, EPA considered recent changes in air quality and emissions. For some areas, this was helpful because there were emission reductions in the most recent years that could be related to observed changes in air quality, while for other areas there appeared to be little change in either air quality or emissions. For areas in which air quality trends, associated with changes in emissions levels, could be discerned, these observed changes were used to help decide whether or not the emission controls in the plan would provide progress towards attainment.

A commenter also complained that EPA has applied the WOE determinations to adjust modeling results only when those results indicate nonattainment, and not when they indicate attainment. First, we disagree with the premise of this comment: EPA does not apply the WOE factors to adjust model results. EPA applies the WOE factors as additional analysis to compensate for uncertainty in the air quality modeling. Second, EPA has

applied WOE determinations to all of the attainment demonstrations proposed for approval in December 1999. Although for most of them, the air quality modeling results by themselves indicated nonattainment, for two metropolitan areas—Chicago and Milwaukee, including parts of the States of Illinois, Indiana, and Wisconsin, the air quality modeling did indicate attainment on the basis of the statistical test.

A commenter further criticized EPA's application of the WOE determination on grounds that EPA ignores evidence indicating that continued nonattainment is likely, such as, according to the commenter, monitoring data indicating that ozone levels in many cities during 1999 continue to exceed the NAAQS by margins as wide or wider than those predicted by the UAM. EPA has reviewed the evidence provided by the commenter. The 1999 monitor values do not constitute substantial evidence indicating that the SIPs will not provide for attainment. These values do not reflect either the local or regional control programs which are scheduled for implementation in the next several years. Once implemented, these controls are expected to lower emissions and thereby lower ozone values. Moreover, there is little evidence to support the statement that ozone levels in many cities during 1999 continue to exceed the NAAQS by margins as wide or wider than those predicted by the UAM. Since areas did not model 1999 ozone levels using 1999 meteorology and 1999 emissions which reflect emission reductions anticipated for control measures that are or will be approved into the SIP, there is no way to determine how the UAM predictions for 1999 compare to the 1999 air quality. Therefore, we can not determine whether the monitor values exceed the NAAQS by a wider margin than the UAM predictions for 1999. In summary, there is little evidence to support the conclusion that high exceedances in 1999 will continue to occur after adopted control measures are implemented.

In addition, a commenter argued that in applying the WOE determinations, EPA ignored factors showing that the SIPs under-predict future emissions, and the commenter included as examples certain mobile source emissions sub-inventories. EPA did not ignore possible under-prediction in mobile emissions. EPA is presently evaluating mobile source emissions data as part of an effort to update the computer model for estimating mobile source emissions. EPA is considering various changes to the model, and is not

<sup>9</sup>The rulemaking referred to here is not a proposed rule covering the ozone attainment demonstration for the Chicago nonattainment area. Rather, the rulemaking referred to here is a proposed rule for an area found to have a shortfall in a state's ozone attainment demonstration. This type of proposed rule generally applied to one of the Northeastern States. This paragraph of the response is not applicable to the Illinois ozone attainment demonstration.

prepared to conclude at this time that the net effect of all these various changes would be to increase or decrease emissions estimates. For attainment demonstration SIPs that rely on the Tier 2/Sulfur program for attainment or otherwise (i.e., reflect these programs in their motor vehicle emissions budgets), States have committed to revise their motor vehicle emissions budgets after the MOBILE6 model is released. EPA will work with States on a case-by-case basis if the new emission estimates raise issues about the sufficiency of the attainment demonstration. If analysis indicates additional measures are needed, EPA will take the appropriate action.

#### Comment 6

A commenter notes that the SIP revisions addressed in the December 16, 1999 proposed rules claim emission reduction credits from relatively recent national EPA rulemakings for surface coatings and consumer products. In most cases, the emission reduction credit claimed is based on EPA estimates of emission reductions from proposed versions of these rules. The final versions of these rules, however, are weaker than the proposed rules in a number of key respects. Therefore, the emission credits claimed for these national rules must be recalculated to reflect only the actual emission reductions that can be expected under the EPA rules as finally adopted.

#### Response 6

We respond to this comment by addressing each of EPA's rules for surface coatings and consumer products.

#### Architectural and Industrial Maintenance (AIM) Coatings

On March 22, 1995, EPA issued a memorandum<sup>10</sup> that provided that States could claim a 20 percent reduction in VOC emissions from the AIM coatings category in ROP and attainment plans based on the anticipated promulgation of a national AIM coatings rule. In developing the attainment and ROP SIPs for their nonattainment areas, States relied on this memorandum to estimate emission reductions from the anticipated national AIM rule. EPA promulgated the final AIM rule in September 1998, codified at 40 CFR Part 59 Subpart D. In the preamble to EPA's final AIM coatings

regulation, EPA estimated that the regulation will result in a 20 percent reduction of nationwide VOC emissions from AIM coatings categories (63 FR 48855). The estimated VOC reductions from the final AIM rule resulted in the same level as those estimated in the March 1995 EPA policy memorandum. In accordance with EPA's final regulation, States have assumed a 20 percent reduction from AIM coatings source categories in their attainment and ROP plans. AIM coatings manufacturers were required to be in compliance with the final regulation within one year of promulgation, except for certain pesticide formulations which were given an additional year to comply. Thus, all manufacturers were required to comply, at the latest, by September 2000. Industry confirmed in comments on the proposed AIM rule that 12 months between the issuance of the final rule and the compliance deadline would be sufficient to "use up existing label stock" and "adjust inventories" to conform to the rule. 63 FR 48848 (September 11, 1998). In addition, EPA determined that, after the compliance date, the volume of nonconforming products would be very low (less than one percent) and would be withdrawn from retail shelves anyway. Therefore, EPA believes that compliant coatings were in use by the Fall of 1999 with full reductions to be achieved by September 2000 and that it was appropriate for the States to take credit for a 20 percent VOC emission reduction in their SIPs.

#### Autobody Refinish Coatings Rule

Consistent with a November 27, 1994 EPA policy,<sup>11</sup> to many States claimed a 37 percent VOC emission reduction from this source category based on a proposed rule. However, EPA's final rule, "National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings," published on September 11, 1998 (63 FR 48806), did not regulate lacquer topcoats and will result in a smaller VOC emission reduction of around 33 percent overall nationwide. The 37 percent VOC emission reduction from EPA's proposed rule was an estimate of the total nationwide emission reduction. Since this number is an overall national average, the actual reduction achieved in any particular area could vary depending on the level of control which already existed in the area prior to the

implementation of the national rule. For example, in California, the reduction from the national rule is zero because California's rules are more stringent than the national rule. In the proposed rule, the estimated percentage reduction for areas that were unregulated before the implementation of the national rule was about 40 percent. However, as a result of the lacquer topcoat exemption added between proposal and final rule, the VOC reduction is now estimated to be 36 percent for previously unregulated areas. Thus, most previously unregulated areas will need to make up the approximately 1 percent difference between the 37 percent estimate of VOC emission reductions assumed by States, following EPA guidance based on the proposal, and the 36 percent VOC emission reduction actually achieved by the final rule for previously unregulated areas. EPA's best estimate of the reduction potential of the final rule was spelled out in a September 19, 1996 memorandum entitled "Emissions Calculations for the Automobile Refinish Coatings Final Rule" from Mark Morris to Docket No. A-95-18.

Note that the 1 percent shortfall in VOC emission reductions in this case is limited to automobile refinishing operations only. The 1 percent shortfall does not apply to the State's VOC emission reduction estimates, as a whole. The State's ozone attainment demonstrations and ROP plan rely on VOC emission reductions from many emission source categories. Therefore, the actual shortfall in the SIP's VOC emission reduction strategy, as a whole and on a percentage basis, is significantly less than 1 percent, only a small fraction of 1 percent. Considering the ROP plan, this small shortfall is more than compensated for through an excess in NO<sub>x</sub> emission reductions, which go well beyond what is required to achieve ROP for each milestone year. Considering the ozone attainment demonstration, a review of modeled ozone concentration changes against predicted changes in VOC and NO<sub>x</sub> emissions shows that a very small change in emissions of well less than 1 percent should produce an undetectable impact on the modeled ozone concentrations. Therefore, this small shortfall is not a basis for disapproving either the ROP plan or the ozone attainment demonstration.

#### Consumer Products Rule

Consistent with a June 22, 1995 EPA guidance,<sup>12</sup> States claimed a 20 percent

<sup>10</sup> "Credit for the 15 Percent Rate-of-Progress Plans for Reductions from the Architectural and Industrial Maintenance (AIM) Coating Rules," March 22, 1995, from John S. Seitz, Director, Office of Air Quality Planning and Standards to Air Division Directors, Regions I-X.

<sup>11</sup> "Credit for the 15 Percent Rate-of-Progress Plans for Reductions from the Architectural and Industrial Maintenance (AIM) Coating Rule and the Autobody Refinishing Rule," November 27, 1994, John S. Seitz, Director OAQPS, to Air Division Directors, Regions I-X.

<sup>12</sup> "Regulatory Schedule for Consumer and Commercial Products under Section 183(e) of the Clean Air Act," June 22, 1995, John S. Seitz,

VOC emission reduction from this source category based on EPA's proposed rule. The final rule, "National Volatile Organic Compound Emission Standards for Consumer Products," (63 FR 48819), published on September 11, 1998, has resulted in a 20 percent VOC emission reduction after the December 10, 1998 compliance date. Moreover, these reductions largely occurred by the Fall of 1999. In the consumer products rule, EPA determined and the consumer products industry concurred, that a significant proportion of subject products have been reformulated in response to State regulations and in anticipation of the final rule. 63 FR 48819. That is, industry reformulated the products covered by the consumer products rule in advance of the final rule. Therefore, EPA believes that complying products in accordance with the rule were in use by the Fall of 1999. It is appropriate for the States to take credit for a 20 percent VOC emission reduction for the consumer products rule in their SIPs.

#### *Comment 7*

A commenter states that the attainment and ROP demonstrations in most States are flawed because they assume a vehicle fleet mix that does not accurately reflect the growing proportion of sport utility vehicles (SUVs) and gasoline trucks, which pollute more than conventional cars. EPA and the States have not followed a consistent practice in updating ozone modeling to account for changes in vehicle fleets. The underestimation of emissions from this can be significant. Therefore, if the motor vehicle emissions inventory has not been updated to prepare the current SIP submission, the SIP should be disapproved.

#### *Response 7*

All of the SIPs on which we are taking final action are based on the most recent vehicle registration data available at the time the SIP was submitted. The SIPs use the same vehicle fleet characteristics that were used in the most recent periodic inventory update. The MVEB for the Illinois ozone attainment demonstration SIP revision is based on vehicle registration data from 1996, which was the most recent data available at the time the SIP revision was submitted. EPA requires the most recent available data to be used, but we do not require it to be updated on a specific schedule. Therefore, different SIPs base their fleet mix on different

years of data. Our guidance does not suggest that SIPs should be disapproved on this basis. Nevertheless, we do expect that revisions to these SIPs that are submitted using MOBILE6 (as required in those cases where the SIP is relying on emissions reductions from the Tier 2 standards) will use updated vehicle registration data appropriate for use with MOBILE6, whether it is updated local data or the updated national default data that will be part of MOBILE6.

#### *Comment 8*

Several commenters note that the CAA requires nonattainment plans to provide for implementation of all RACM as expeditiously as practicable. The SIPs at issue in the December 16, 1999 proposed rules do not meet these requirements. The plans contain only a limited set of emission control measures, and fail to offer any justification for the States' failure to adopt numerous available measures that were specifically identified by EPA and others. In addition, the SIPs contain no demonstration or claim that the emission control schedules are the earliest practicable ones.

These commenters note that the Phase II NO<sub>x</sub> limits agreed to by the Ozone Transport Commission States are clearly RACM, as they are widely in effect. States that have adopted such measures have not adopted enforceable NO<sub>x</sub> RACT limits for all relevant facilities within their jurisdiction. It is not sufficient for States to assert that they will adopt additional NO<sub>x</sub> emission controls if needed. The CAA requires each SIP to include all RACM now, and to show that such measures have been adopted in legally enforceable forms.

#### *Response 8*

EPA has previously provided guidance interpreting the RACM requirements of 172(c)(1). See 57 FR 13498, 13560. In that guidance, EPA indicated its interpretation that potentially available measures that would not advance the attainment date for an area would not be considered RACM. EPA concluded that a measure would not be reasonably available if it would not advance attainment. EPA also indicated in that guidance that states should consider all potentially available measures to determine whether they were reasonably available for implementation in the area, and whether they would advance the attainment date. Further, states should indicate in their SIP submittals whether measures considered were reasonably available or not, and if measures are reasonably available they must be

adopted as RACM. Finally, EPA indicated that states could reject potential RACM measures either because they would not advance the attainment date, would cause substantial widespread and long-term adverse impacts, or for various reasons related to local conditions, such as economics or implementation concerns. The EPA also issued a recent memorandum on this topic, "Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas." John S. Seitz, Director, Office of Air Quality Planning and Standards. November 30, 1999. Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

More specifically with respect to the Chicago nonattainment area, as noted elsewhere in this final rule and in the July 11, 2001 proposed rule (66 FR 36370), we have determined that the Illinois SIP does provide for the implementation of RACM. In addition, the State has been granted a waiver from adopting and implementing NO<sub>x</sub> RACT requirements in the Chicago nonattainment area. Therefore, these emission controls are not RACM for this area. Finally, the State has adopted and is implementing regional NO<sub>x</sub> controls, which have been demonstrated to support the attainment of the ozone standard.

Although EPA encourages areas to implement available RACM measures as potentially cost-effective methods to achieve emissions reductions in the short term, EPA does not believe that section 172(c)(1) requires implementation of potential RACM measures that either require costly implementation efforts or produce relatively small emissions reductions that will not be sufficient to allow any of the four areas to achieve attainment in advance of full implementation of all other required measures. Because we believe that additional control measures are not reasonably available for the Chicago nonattainment area, EPA believes that the attainment date proposed for approval is as expeditious as practicable.

#### *Comment 9*

A commenter states that the air quality plans are deficient with respect to Transportation Control Measures (TCMs). The plans contain no or few serious new measures to reduce growth in vehicle travel. Most plans do not seriously consider the possibility of major expansion of transit service, reduced or zero transit fares, pricing strategies, etc. There is also substantial evidence that significant air quality

benefits can be achieved by modifying land development patterns to limit urban sprawl and to facilitate transit use. The commenter cites several examples that would apply to this issue. The States have generally not included any of these types of measures in their SIPs, and have offered no justification for the failure to do so.

#### Response 9

EPA has long advocated that States consider the kinds of emission control measures that the commenter has suggested, and EPA has indeed provided guidance on those measures. See, for example, <http://www.epa.gov/otaq/transp.htm>. In order to demonstrate that they will attain the 1-hour ozone NAAQS as expeditiously as practicable, some areas may need to consider and adopt a number of measures—including the kind of measures that EPA itself evaluated in the RACM analysis for three serious ozone nonattainment areas—that even collectively do not result in many emission reductions. Further more, EPA encourages areas to implement technically available and economically feasible measures to achieve emissions reductions in the short term—even if such measures do not advance the attainment date—since such measures will likely improve air quality. Also, over time, emission control measures that may not be RACM now for an area may ultimately become feasible for the same area due to advances in control technology or more cost-effective implementation techniques. Thus, areas should continue to assess the state of emissions control technology as they make progress toward attainment and consider new emissions control technologies that may in fact result in more expeditious improvement in air quality.

Our approach toward TCMs as RACM and the RACM requirement is grounded in the language of the CAA. Section 172(c)(1) states that a SIP for a nonattainment area must meet the following requirement, “In general,—Such plan provisions shall provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.” The EPA interprets this language as tying the RACM requirement to the requirement for attainment of the primary air quality standards. The CAA provides that the

attainment date shall be “as expeditiously as practicable but no later than \* \* \*.” the deadlines specified in the CAA. EPA believes that the use of the same terminology in conjunction with the RACM requirement serves the purpose of specifying RACM as the way of expediting attainment of the NAAQS in advance of the attainment deadline(s) specified in the CAA. As stated in the “General Preamble” (57 FR 13498 at 13560, April 16, 1992), “The EPA interprets this requirement to impose a duty on all nonattainment areas to consider all available control measures and to adopt and implement such measures as are reasonably available for implementation in the area as components of the area’s attainment demonstration.” In other words, because of the construction of the RACM language in the CAA, EPA does not view the RACM requirement as separate from the attainment demonstration requirement. Therefore, EPA believes that the CAA supports its interpretation that measures may be determined to not be RACM if they do not advance the attainment date. In addition, EPA believes that it would not be reasonable to require implementation of measures that would not in fact advance attainment. See 57 FR 13560.

The term “reasonably available control measure” is not actually defined in the definitions contained in the CAA. Therefore, the EPA interpretation that potential emission control measures may be determined not to be RACM if they require an intensive and costly implementation effort for numerous small area sources is based on the common sense meaning of the phrase, “reasonably available.” A measure that is reasonably available is one that is technologically and economically feasible and that can be readily implemented. Ready implementation also includes consideration of whether emission reductions from sources are relatively small and whether the administrative burden, to the States and regulated entities, of controlling such sources was likely to be considerable. As stated in the General Preamble, EPA believes that States can reject potential emission control measures based on local conditions, including costs. See 57 FR 13561.

As noted in our July 11, 2001 proposed rule (66 FR 36370, 36398), Illinois has addressed the adoption and implementation of TCMs through an ongoing and continuous evaluation and implementation of TCMs in the Chicago nonattainment area and through including reasonably available TCMs in the SIP. The IEPA has worked extensively with the Chicago Area

Transportation Study (CATS), which is the Metropolitan Planning Organization (MPO) for Chicago nonattainment area, to evaluate and implement TCMs which are reasonably available. The IEPA has been an active participant in the evaluation of TCMs for funding with the Congestion Mitigation and Air Quality (CMAQ) Program.

The Illinois SIP has approved TCMs which are credited in both the 15 percent ROP plan (62 FR 66279) and the post-1996 ROP plan (65 FR 78961). The first TCMs to be approved into the Illinois SIP were approved in 1995 as part of the Vehicle Miles Travelled (VMT) offset SIP (60 FR 48896). The 127 TCMs which were approved included commuter parking, a rideshare program, new rapid transit service, traffic signal coordination projects, an improved vanpool program, and new transportation centers and train station reconstruction. Since that time, additional TCMs have been implemented and added to the SIP. Additional TCMs were approved into the SIP when the 9 percent post-1996 ROP plan was approved on December 18, 2000. The additional TCMs included improved public transit, such as fixed guideway transit and rail station improvements, traffic flow improvements, increased park and ride service, increased parking at transit stations, and bicycle and pedestrian programs.

CATS has prepared a series of reports which evaluated emissions control benefits for various TCMs and has reported on the implementation of TCMs in the Chicago area. The CATS reports are listed in our July 11, 2001 proposed rule (66 FR 36370, 36398). These reports have been submitted by the IEPA as part of the documentation of the SIP and are contained in the docket for this action.

We have concluded that, through the IEPA and CATS process of TCM evaluation and selection, Illinois has considered and implemented all reasonably available TCMs. As explained in the July 11, 2001 proposed rule (66 FR 36370), any measures that have not been included in the SIP would provide only marginal air quality improvements at significantly greater expense or with other significant implementation barriers and would not advance attainment of the 1-hour ozone standard.

#### Comment 10

A commenter notes that a 1993 State and Territorial Air Pollution Program Administrators (STAPPA) report recommended adoption of a California or South Coast Air Quality Management

District (SCAQMD) controls or emission limits for various source categories. The commenter mentions further possible control measures as well, and notes that none of the States offered consideration of these emission control measures accompanied by reasoned explanations for their rejection.

#### *Response 10*

The State has completed the adoption of the ozone attainment demonstration and its associated emissions control strategy. We have determined that the SIP, as currently adopted by the State, addresses the implementation of RACM. Section 172(c)(1) of the CAA requires SIPs to contain RACM and provides for areas to attain as expeditiously as practicable. EPA has previously provided guidance interpreting the requirements of section 172(c)(1). See 57 FR 13498, 13560. In that guidance, EPA indicated its interpretation that potentially available measures that would not advance the attainment date for an area would not be considered to be RACM. EPA also indicated in that guidance that States should consider all potentially available emission control measures to determine whether they are potentially available for implementation in an area and whether they would advance the attainment date. Further, States should indicate in their SIPs whether emission control measures considered were reasonably available or not, and, if measures are reasonably available, they must be adopted by the States as RACM. Finally, EPA indicated that States could reject emission control measures as not being RACM because they would cause substantial widespread and long-term adverse impacts, or would be economically or technologically infeasible. This policy has been detailed in other comments addressing RACM and comments suggesting other measures that could have been considered for implementation.

As stated in the July 11, 2001 proposed rule (66 FR 36370), the State of Illinois, along with the other Lake Michigan Air Director Consortium (LADCO) states,<sup>13</sup> considered a wide range of measures for their reduction potential, cost, and ease of implementation. The State of Illinois has implemented measures which have met the required ROP reductions and have also been modeled in the attainment demonstration modeling which demonstrates that the Lake

Michigan area can show attainment of the 1-hour ozone standard by the 2007 attainment date. Illinois relies in large part on emission reductions from outside of the Chicago nonattainment area resulting from EPA's NO<sub>x</sub> SIP Call rule or section 126 NO<sub>x</sub> rule (65 FR 2674, January 18, 2000) to reach attainment of the ozone standard. In the NO<sub>x</sub> SIP Call (63 FR 57356), we concluded that NO<sub>x</sub> emission reductions from various upwind States were necessary to provide for timely attainment of the 1-hour ozone standard in nonattainment areas in various downwind States, including Illinois on both counts. The NO<sub>x</sub> SIP Call established requirements for control of sources of significant NO<sub>x</sub> emissions in the relevant upwind States. These NO<sub>x</sub> emission reductions are not expected to be fully implemented until May 2004. The ozone attainment demonstration for Illinois indicates that the ozone reduction benefit expected to be achieved from the regional NO<sub>x</sub> emission reductions is substantial. We have seen no evidence for similar ozone benefits resulting from Illinois-specific emission controls not already adopted by the State that would significantly advance the attainment date for the Chicago-Gary-Lake County ozone nonattainment area. Therefore, EPA concludes, based on the available documentation, that the emission reductions from additional emission control measures will not advance attainment, and, thus, none of the possible additional emission control measure can be considered to be RACM for the purposes of section 172(c)(1) of the CAA.

It should be noted that Illinois, along with the other LADCO States, has considered a wide range of possible emission controls as part of the Lake Michigan Ozone Control Program. The States reviewed the emission controls being implemented elsewhere in the United States and considered possible source controls for source categories with significant VOC and NO<sub>x</sub> emissions. This included emission controls recommended by STAPPA and implemented by SCAQMD and other States. Possible emission controls were evaluated in terms of ease of implementation and cost-effectiveness, possible timing for implementation, and public and industrial acceptability. This analysis led the individual LADCO States to give additional consideration to possible emission controls specifically applicable to their individual States (few possible emission controls had generally applicability to all LADCO States). The emission

controls given favorable further consideration generally became parts of the States' ROP plans. The rejected emission controls would not be considered to be RACM under EPA policy as discussed above.

#### *Comment 11*

A commenter states that MVEBs in the state plans are by definition inadequate because the plans do not demonstrate timely attainment or contain the emission reductions required for all RACM. The commenter asserts that the EPA may not find as adequate a MVEB that is derived from a SIP that is inadequate for the purposes for which it is submitted. The commenter believes that none of the MVEBs in the state plans addressed in the December 16, 1999 proposed rules are consistent with either the level of emissions achieved by implementation of all RACM, nor are they derived from SIPs that provide for attainment.

#### *Response 11*

As noted above and in the July 11, 2001 proposed rule (66 FR 36370), we have determined that the State's air quality plan, as submitted in December 2000, does reflect the adoption and implementation of RACM. The plan also contains MVEBs based on the plan's ozone attainment demonstration. Therefore, we disagree with the commenters assertion that we cannot approve the plan's MVEBs.

See the response to Comment 1 above.

#### *Comment 12*

A commenter notes that the CAA requires the SIPs to include a program to provide for the enforcement of the adopted control measures. Most plans address this requirement, however, none of the plans clearly set out programs to provide for enforcement of the various emission control strategies relied on for emission reduction credit.

#### *Response 12*

In general, state enforcement, personnel and funding program elements are contained in SIP revisions previously approved by EPA under obligations set forth in section 110(a)(2)(c) of the CAA. Once approved by the EPA, there is no need for states to readopt and resubmit these programs with each and every SIP revision generally required by other sections of the CAA. In addition, emission control regulations will also contain specific enforcement mechanisms, such as record keeping and reporting requirements, and may also provide for periodic state inspections and reviews of the affected sources. EPA's review of

<sup>13</sup> The Lake Michigan Air Directors Consortium was formed to seek solutions to ongoing ozone air quality problems in the Lake Michigan region, and is made up of representatives of the State of Illinois, Indiana, Michigan, and Wisconsin.

these regulations includes review of the enforceability of the regulations. Rules that are not enforceable are generally not approved by the EPA. To the extent that the ozone attainment demonstration and ROP plan depend on specific state emission control regulations, these individual regulations have undergone review by the EPA in past or separate approval actions. Note that the Chicago attainment demonstration and post-1999 ROP plan do not depend on the implementation of State emission control regulations that have not already been approved by the EPA or that need further review by the EPA (the State's NO<sub>x</sub> rules, as discussed elsewhere in this final rule, have been approved through sign-off by the EPA and are undergoing separate rulemaking).

#### *Comment 13*

A commenter notes that the States were required by the CAA to have SIPs in place by 1994 containing all RACM and providing for attainment as expeditiously as practicable. If additional control measures are required, those measures must be adopted and included in the SIP now. Deferred adoption and submittal of these control measures is not consistent with the statutory mandates and is not consistent with the CAA's demand that all SIPs contain enforceable measures, and approval of this approach exceeds EPA's authority to approve a SIP if a portion of the SIP is not adequate to meet all tests for approval. Therefore, for all of the forgoing reasons, EPA must disapprove the attainment demonstrations for serious and severe nonattainment area ozone SIPs.

#### *Response 13*

See the response to Comment 1 above. We have determined that the Illinois SIP provides for the implementation of RACM. In addition, the attainment demonstration and post-1999 ROP plan are supported by State-adopted emission control measures as well as Federal emission control measures.

#### *Comment 14*

A commenter alleges that the April 1998 Illinois SIP submittal and the changes proposed by the State at the January 18, 2000 hearing fall short of completing the attainment demonstration SIP for the 1-hour ozone standard.

#### *Response 14*

As noted in the July 11, 2001 proposed rule (66 FR 36370), Illinois has completed the adoption and submittal of the ozone attainment

demonstration for the Chicago nonattainment area.

#### *Comment 15*

A commenter believes that Illinois has not selected or adopted a final emissions control strategy that is consistent with a modeled attainment demonstration, as required by the CAA.

#### *Response 15*

We agree that, at the time of the preparation of the December 16, 1999 proposed rule, Illinois had not completed adoption of an emissions control strategy supported by an ozone attainment demonstration. This was stated in that proposed rule. This problem has been corrected with Illinois' submittal of the attainment demonstration supplement in December 2000. The final attainment demonstration and its associated emissions control strategy were addressed in the July 11, 2000 proposed rule (66 FR 36370). It is noted that Illinois has adopted the emissions control strategy that supports the ozone attainment demonstration and has adopted all emission control rules required to implement this emissions control strategy.

#### *Comment 16*

A commenter believes that the IEPA relied on numerous assumptions about boundary conditions with regard to future NO<sub>x</sub> emission reductions and inaccurate WOE analyses to rationalize an acceptable ozone attainment demonstration. After submittal of the plan in April 1998, IEPA subsequently learned that the 1999 VOC emission reductions in the Chicago area were overestimated due to mistakes and deferred emission control strategies. Thus, the modeling on which the State relied is inaccurate and ozone improvements are overestimated. Additionally, the State has taken advantage of EPA's flawed NO<sub>x</sub> substitution policy to hide shortfalls in VOC emission reductions.

#### *Response 16*

When the IEPA prepared the ozone attainment demonstration reviewed in the December 16, 1999 proposed rule (64 FR 70496), the State followed EPA's guidance, as outlined in that proposed rule, in making certain assumptions about future boundary conditions expected to be impacted by EPA's NO<sub>x</sub> SIP Call. The State of Illinois (and the other LADCO States) tested a number of different scenarios for future reductions in regional NO<sub>x</sub> emissions. Since the State could not select and adopt a specific scenario for future NO<sub>x</sub>

emission reductions at that time (at the time of the April 1998 submittal), the State elected to submit the modeling results for the range of regional NO<sub>x</sub> emission reduction scenarios considered without adopting a specific emissions control strategy.

The State realized that additional analyses would have to be conducted after EPA and the courts had resolved legal challenges to EPA's NO<sub>x</sub> SIP Call. As part of the followup to the April 1998 submittal and to meet EPA's requirements for approval of the ozone attainment demonstration (see 64 FR 70496), Illinois and the other LADCO States reassessed the projected local and regional VOC and NO<sub>x</sub> emission reductions. The subsequent December 2000 ozone attainment demonstration modeling reflects the corrected VOC and NO<sub>x</sub> emission reduction estimates. Therefore, the problems identified by the commenter have been corrected in the subsequent SIP submittal.

With regard to substitution of NO<sub>x</sub> emission controls for VOC emission controls, this is an issue relevant to ROP plans and not to ozone attainment demonstrations. The CAA authorizes the States to select a mixture of VOC and NO<sub>x</sub> emission controls to attain the ozone standard (see section 182(b)(1)(A)(i) of the CAA). The CAA does not restrict the State to only VOC emission controls to attain the ozone standard. The use of the photochemical dispersion models can address the relative merits of VOC versus NO<sub>x</sub> emission controls and the relative merits of local versus regional emission controls for both categories of these pollutants.

With regard to the substitution of NO<sub>x</sub> emission controls for VOC emission control to achieve ROP requirements, you are referred to Comment 29 and our response to that comment below.

#### *Comment 17*

A commenter notes that the proposed conditional approval of Illinois' ozone attainment demonstration allows Illinois to submit a completely different emissions control strategy, motor vehicle emissions budget, and photochemical modeling by December 2000 to demonstrate attainment and avoid disapproval of the ozone attainment demonstration. EPA, however, wants the emissions controls strategy and motor vehicle emissions budget that is consistent with the attainment demonstration to make an adequacy decision by May 31, 2000. In the commenter's opinion, Illinois is not in a position to provide an MVEB with its current modeling (at the time the commenter prepared this comment in

February 2000), and promises to create these products and/or emissions reductions in the future are not acceptable. Final conditional approval of the attainment SIP is not warranted, nor is an adequacy finding for the emissions control strategy or motor vehicle emissions budget without significant improvements.

#### *Response 17*

The States of Illinois, Indiana, and Wisconsin submitted attainment demonstration SIP revisions in April 1998 in response to EPA requirements. At the time, there was no final EPA decision on the level of NO<sub>x</sub> SIP Call emission reductions that EPA would require these States to achieve. The April 1998 Illinois submittals reflected this uncertainty by demonstrating that various levels of local emission controls could provide for attainment of the 1-hour ozone standard depending on the amount of upwind NO<sub>x</sub> emission reductions assumed to result from the NO<sub>x</sub> SIP Call. Although no specific emissions control strategy was selected, the submittals did provide for attainment of the 1-hour ozone standard in the Lake Michigan area given the available information. Consequently, EPA determined that the 1998 Illinois submittal could be approved, but only on the condition that it be supplemented by updated ozone modeling and additional emission control rules supporting and implementing an adopted emissions control strategy, all to be submitted by December 2000. In the meantime (until the submittal of the final ozone attainment demonstration in December 2000), the emissions control strategy and the MVEB consistent with the 1998 submittal were assumed to be adequate on an interim basis for purposes of making conformity determinations. The EPA recognized that the State was obligated to submit a final attainment demonstration and associated MVEB by December 2000 (December 16, 1999 proposed rule (64 FR 70496)). The commenter provides no convincing basis for concluding that the EPA erred in its December 16, 1999 proposed conditional approval. The proposed conditional approval correctly recognized that the State had not completed the emission control strategy adoption process due to uncertainty over regional NO<sub>x</sub> emission reduction requirements, the selection and adoption of which was affected by an uncertain situation beyond the control of the State.

Note that the December 2000 submittal included a final, adopted emissions control strategy and a revised

adopted MVEB which replaced the interim versions. This submittal moots the commenter's prior concern.

#### *Comment 18*

The State notes (in response to the December 16, 1999 proposed rule) that it has committed on several occasions to adopt the control measures, including NO<sub>x</sub> emission reductions, necessary to attain the 1-hour ozone standard.

#### *Response 18*

The State has satisfied its commitment to adopt the emission control measures in the December 2000 attainment demonstration and post-1999 ROP plan submittal and through the adoption of NO<sub>x</sub> emission control regulations for major Electrical Generating Units (EGUs), major non-EGU boilers and turbines, and major cement kilns.

#### *Comment 19*

The State notes that it has committed to perform a MCR as necessary and appropriate as part of a recent amendment to the SIP, but believes that the timing of the MCR is incompatible with the ozone standard and with EPA's rules regarding the submission of quality assured data. The State observes that a MCR following the ozone season in 2003 will reflect only one season where regional controls of NO<sub>x</sub> emissions have been implemented. One season's ozone levels are insufficient to provide a trend analysis. Review of the impacts of the implementation of the emissions control strategy would be heavily reliant on the weather conditions of that particular ozone season.

The State notes that a MCR following the 2003 ozone season does not reflect the form of the ozone standard, which is essentially a 3-year standard. The State will not be able to credibly determine whether additional emissions control measures are necessary after only one season during which the control measures identified in the ozone attainment demonstration have been implemented.

The State believes that the EPA determined that the MCR should be performed in 2003 to accommodate ozone nonattainment areas classified as serious, whose attainment dates are 2005. The State has no opinion regarding the appropriateness of a MCR in 2003 for those areas. The State, however, believes that there is available time for nonattainment areas with attainment dates of 2007 to perform a more meaningful MCR in 2004 or 2005, after emission controls identified in the SIP supplement to be submitted at the

end of 2000 have been in place for two or three ozone seasons. (This comment and other State comments on the timing of the MCR discussed here were submitted in response to the December 16, 1999 proposed rule. Even though the EPA subsequently changed its policy regarding the timing of the MCR and the State subsequently revised the committed timing for the MCR to 2004 making these comments generally moot, they are addressed for purposes of completeness.)

The State believes that EPA's ozone draft guidance recognizes that a MCR in 2004 or 2005 would be more robust and would require fewer manipulations of data and much less speculation regarding the future impact of the emission control measures implemented in 2003 (the NO<sub>x</sub> SIP Call rules) as well as the need for additional emission control measures.

The State asserts that, for the purposes of the MCR, it is not realistic for EPA to expect states to provide quality assured ozone data between the end of the ozone season and the end of the calendar year. EPA's rules allow 90 days for a state to quality assure and submit data to the Aerometric Information Retrieval System (AIRS), but EPA is requiring a submittal of the data and an analysis of the data before the end of the 90 day period. This could significantly impact the States' approaches to attainment within that same 90 day period. Although the IEPA does not believe that emission reductions beyond those that will be included in the final SIP will be necessary for Illinois to attain the 1-hour ozone standard, IEPA believes that they can provide EPA with an analysis, if not by December 31, 2003, then shortly thereafter. Nevertheless, the timing of EPA's requirement for a MCR is contrary to its own rules regarding submission of quality assured data, and, therefore, is inappropriate.

#### *Response 19*

EPA understands the issue of timing. However, the timing issue involves balancing two critical factors. On the one hand, for a MCR to be useful in flagging the need to make changes to an emissions control strategy in time to affect attainment by the attainment date (by November 15, 2007 for the Chicago nonattainment area), it needs to be done sufficiently in advance of the attainment date. On the other hand, the MCR would be able to discern more accurately whether progress is being made if there were sufficient emission reductions that occurred in the time period between the attainment demonstration modeling and the time the MCR is performed. Thus, in



reviewing a state's commitment regarding the performance of a MCR for any specific area, EPA must appropriately accommodate these two factors. In general, EPA believes that the states should perform the MCR for ozone nonattainment areas within the NO<sub>x</sub> SIP Call region (which includes Illinois) immediately following the first ozone season (April 15 through October 15 for the Chicago nonattainment area) during which sources are required to comply with the state's NO<sub>x</sub> SIP.

Because the Court extended the source compliance deadline for the NO<sub>x</sub> SIP Call until May 31, 2004, EPA generally believes that for areas in the Eastern United States, the most appropriate time to perform the MCR would be following the 2004 ozone season.

The December 16, 1999 NPRs for the ten serious and severe ozone nonattainment areas noted that, for serious areas with an attainment date extension to 2005 or earlier, it would be impracticable to perform a mid-course review per se. The NPRs asked the states to commit instead to an early assessment of whether attainment will be achieved. See for example 64 FR 70319 at 70325 (NPR for the Western Massachusetts ozone nonattainment area). Thus, EPA did not base its recommendation for the MCR in 2003 on the assumption that the 18 to 24 month period between completion of the MCR and November 2005 would be a sufficient period to ensure attainment for serious nonattainment areas by 2005. EPA, however, continues to believe that for areas with an attainment date of 2007, the best balance in terms of timing for the MCR is to ensure that the area has several years between completion of the MCR and its attainment date in order for the state and EPA to assess the need for the state (or perhaps upwind states) to adopt and implement additional controls. Due to the court-ordered delay in the mandatory source compliance date under the NO<sub>x</sub> SIP Call, EPA believes that performing the MCR by the end of 2004 best accommodates the need for emission controls to be implemented and the need for EPA and states to have time to take action in response to the MCR.

With regard to the timing of the MCR for severe nonattainment areas versus serious nonattainment areas, as noted above, we conceptually agree with the commenter. Performing the MCR after the implementation of significant emission controls and after assessing the ozone data for the time period following the implementation of these emission controls would provide a more robust MCR with fewer assumptions regarding the impacts of the emission controls on

ozone levels. Nonetheless, to allow for sufficient time to prepare and implement supplemental emission controls, if needed, prior to the ozone standard attainment deadline, the MCR must be conducted several years prior to the attainment deadline. A sufficient lead time of 2 to 3 years is believed to be reasonable. Therefore, for a severe ozone nonattainment area with a 2007 attainment deadline, the MCR should be conducted no later than late 2004. Illinois' commitment to conduct the MCR by the end of 2004 meets this recommendation.

Please note from the July 11, 2001 proposed rule (66 FR 36370) that we are proposing to approve Illinois' commitment to conduct the MCR by the end of 2004, after the implementation of the State's NO<sub>x</sub> emission control rules in compliance with EPA's NO<sub>x</sub> SIP Call. This timing may not allow the State to collect and quality assure ozone data from the entire 2004 ozone season (the State is allowed up to 90 days following a calendar quarter to quality assure the ozone data and submit the data to the EPA) following "normal" quality assurance schedules and to include all of these data in the 2004 MCR. The State may have to expedite the quality assurance of the 2004 ozone data to include as many of the 2004 ozone data as possible in the MCR. On the other hand, the State should be able to project the impacts of the NO<sub>x</sub> emission control rules using new or available ozone modeling and the 2001-2003 ozone data to draw some MCR conclusions.

Conducting a MCR by the end of 2004 will make it difficult for the State to fully quality assure and incorporate the ozone season ozone data for 2004 into the MCR while still allowing time for preparation of the MCR and public review and input into this process. Nonetheless, as noted above, the use of current ozone data is only one metric that may be taken into consideration in this process. In addition, the State will be able to take into consideration ozone data through 2003 which should be quality assured well before the production of the MCR. The State may also choose to pursue expedited quality assurance of the 2004 data if the State considers that to be an overwhelming need for the purposes of preparing the MCR, although such data use is not required by the EPA.

We assume that the State will use all available data in the preparation of the MCR. To the extent 2004 data are available, the state is encouraged to make use of such data.

#### *Comment 20*

A commenter notes that a majority of the States that belong to the Ozone Transport Region (OTR) were given until October 31, 2001 to submit their regional NO<sub>x</sub> strategy that demonstrates attainment of the 1-hour ozone standard, while Illinois is required to submit a fully adopted attainment strategy, including any regional emission reductions, by December 2000. Equity requires that EPA grant Illinois and other Lake Michigan States the same amount of time to submit a regional strategy as has been granted the OTR States.

The commenter notes that the EPA states that the basis for extending the deadline for the OTR States is section 184 of the CAA, which creates a Congressionally recognized ozone transport region, and that the OTR needs additional time to make the necessary agreements to adopt a regional strategy. Section 184 of the CAA, however, does not explicitly extend for States in the OTR any attainment deadlines.

The commenter believes that the OTR being recognized by Congress has no bearing on the ability of multiple states to address regional NO<sub>x</sub> controls. States not located in the OTR may encounter more barriers in arriving at a regional approach, yet the resulting product will be as beneficial to air quality as the product of the OTR.

EPA's call for NO<sub>x</sub> SIPs, calling for regional NO<sub>x</sub> emission reductions, explicitly recognized that Illinois needs reductions in its boundary conditions in order to attain the 1-hour ozone standard, as do the States of Indiana, Michigan, and Wisconsin. To this end, Illinois and the other Lake Michigan States, as well as the upwind neighboring States of Missouri, Kentucky, Iowa, and Tennessee, are currently working cooperatively to model and to develop a regional ozone strategy. Hence, the same or greater complexities that apply to the OTR States also apply to the efforts of these Midwestern States to develop a regional control strategy.

The commenter notes that Illinois has the same or later 1-hour ozone standard attainment date as the ozone nonattainment areas included in the OTR, and should, therefore be granted until October 31, 2001 to develop the regional portion of the ozone attainment strategy.

#### *Response 20*

As an initial matter, this issue is moot. Illinois, along with Indiana and Wisconsin, submitted SIP revisions with



fully adopted rules, and EPA is fully approving those SIP revisions today. Thus, there is no shortfall (as exists for many of the OTR States) for either the Chicago or Milwaukee areas, and these States do not need additional time to submit more SIP revisions relative to attainment of the 1-hour ozone standard.

Moreover, the circumstances that existed at the time of the proposed actions in December 1999 differed substantially between the States in the Northeast and those in the Midwest. At the time of EPA's proposals in December 1999, the States in the Northeast submitted SIP revisions that they believed fully complied with what was required to be submitted by December 2000—i.e., completed ozone modeling and fully adopted emission control measures. In contrast, at the same time the Midwestern States encompassing the Chicago-Gary-Lake County and Milwaukee-Racine ozone nonattainment areas had not yet identified a specific emission control strategy to attain the ozone standard and had not yet submitted SIP revisions with fully adopted emission control measures, and had existing commitments to submit the adopted measures by December 2000. Upon review of the SIP revisions for the Northeastern ozone nonattainment areas, EPA concluded that each area needed additional emission reductions in order to have a fully approvable SIP (to eliminate shortfalls in their adopted emission control strategies). At the time of the proposed actions, EPA was unable to determine if there would be shortfalls for the Midwest areas because they had not identified final emission control strategies to attain the ozone NAAQS.

In considering how EPA should allow the States to adopt emission control measures to fill the shortfalls, EPA considered that these areas (the Northeastern nonattainment areas) were located in the Ozone Transport Region (OTR) and that EPA should provide the OTR States with time to develop recommended emission control measures to achieve emission reductions to fill the shortfalls. Thus, EPA provided in the proposed actions to give these areas until October 31, 2001 to complete the OTR process and to adopt measures sufficient to fill the shortfalls. Because the Midwest States were on track to identify a final emissions control strategy and to submit adopted measures by December 2000, EPA saw no need—and neither the States nor any other interested party identified a need—to extend the time period for submission of the final plans.

The commenter claims that the Northeast States were given a longer time to adopt “regional” emission control measures. EPA notes that, with respect to EPA's regional NO<sub>x</sub> SIP Call, all States were required to submit NO<sub>x</sub> emission control rules by October 30, 2000 and to implement the rules by May 31, 2004. The Northeast States were not provided a longer time than the Midwest States to either submit or implement these rules.

#### *Comment 21*

For States that need additional VOC emission reductions, a commenter recommends a process to achieve these VOC emission reductions, which involves the use of HFC-152a (1,1 difluoroethane) as the blowing agent in the manufacture of polystyrene products, such as food trays and egg cartons. HFC-152a could be used instead of hydrocarbons as a blowing agent. Use of HFC-152a, which is classified as a non-VOC (VOC exempt), would eliminate nationwide the entire 25,000 tons per year of VOC emissions from this industry.

#### *Response 21*

EPA met with the commenter and discussed the technology described in the comment. Since the HFC-152a is VOC exempt, its use would give a VOC reduction compared to the use of VOCs, such as pentane or butane, as blowing agents. EPA, however, has not studied this technology exhaustively. It is each State's prerogative to specify which measures it will adopt in order to achieve the additional VOC reductions it needs. In evaluating the use of HFC-152a, States may want to consider claims that products made with this blowing agent are comparable in quality to products made with other blowing agents. Also, the question of the over-all long term environmental effect of encouraging emissions of fluorine compounds would be relevant to consider. This is a technology which States may want to consider, but ultimately, the decision of whether to require this particular technology to achieve the necessary VOC emissions reductions must be made by each affected State. Finally, EPA notes that under the Significant New Alternatives Policy (SNAP) program, created under CAA section 612, EPA has identified acceptable foam blowing agents, many of which are not VOCs (<http://www.epa.gov/ozone/title6/snap/>).

#### *Comment 22*

The State generally supports the proposed rule, and concurs with the EPA that the NO<sub>x</sub> waiver should remain

in place for RACT, NSR, and certain requirements of I/M and transportation and general conformity.

#### *Response 22*

No response is required for this concurrence with the proposed rule.

#### *Comment 23*

A commenter asserts that the State's air quality modeling based on additional NO<sub>x</sub> emissions from 10 peaker<sup>14</sup> facilities in the Chicago area and 30 peaker facilities in the State of Illinois, as addressed in the State's December 2000 submittal, significantly underestimates the potential number of peaker units and their resulting NO<sub>x</sub> emissions and ozone impacts in these areas. The commenter supports this comment by listing the additional peakers (not considered in the State's analysis) seeking source permits in Illinois. In addition, due to the existing NO<sub>x</sub> waiver in the Chicago ozone nonattainment area, there is nothing to prevent the unchecked proliferation of new NO<sub>x</sub> sources in this source category. Therefore, the commenter believes that IEPA's ozone modeling and ozone projections are inadequate, and do not form a credible basis for the proposed approval of the State's ozone attainment demonstration and our proposed rule on the NO<sub>x</sub> waiver petition.

The commenter notes that the State's analysis failed to include a number of peaker units now under consideration for source permitting by the State. This conclusion is based on a review of publicly available Illinois permit records for natural gas-fired electrical generating units in the Chicago ozone nonattainment area, which shows potential NO<sub>x</sub> sources not included in Illinois' prior ozone modeling. Illinois' inability to correctly project NO<sub>x</sub> emissions from new permitted peaker units is a direct consequence of the proliferation of this new generation of NO<sub>x</sub> sources. This is a direct consequence of maintaining the NO<sub>x</sub> waiver for new sources.

#### *Response 23*

It is true that Illinois' modeling directly considered only the additional NO<sub>x</sub> and VOC emissions from newly permitted peakers (permitted prior to the December 2000 SIP revision submittal), and did not estimate the emissions and ozone impacts resulting from other sources seeking permits or that may seek permits prior to 2007.

<sup>14</sup> A peaker is an electrical generating unit designed for rapid startup and use on a limited number of days with a high demand for electricity generation.

However, potential emissions from new facilities were considered in two ways. First, Illinois, along with the other LADCO States, made reasonable projections of source growth in the core attainment demonstration (the attainment demonstration supported by the LADCO technical support documentation). The SIP makes assumptions that new sources will be constructed and that existing sources may be modified resulting in increased NO<sub>x</sub> emissions. Under the NO<sub>x</sub> SIP Call, which was modeled by the LADCO States, these sources would fall under a statewide NO<sub>x</sub> emissions cap established for the State in the NO<sub>x</sub> SIP Call rule. Thus, the State has adequately demonstrated attainment of the ozone standard given the data available at the time of the SIP revision submittal. Second, the State, as a test of the modeling/attainment demonstration sensitivity to increased NO<sub>x</sub> emissions, added the NO<sub>x</sub> emissions from newly permitted peakers to the NO<sub>x</sub> emissions already projected for 2007 in the ozone attainment demonstration and conducted supplemental ozone modeling. This supplemental modeling showed increased peak ozone levels, but within acceptable limits still demonstrating future attainment of the ozone standard.

The commenter's concerns over undocumented/unmodeled new NO<sub>x</sub> sources are inconsequential or unfounded for the following reasons. First, the modeled 2007 NO<sub>x</sub> emissions, documented in the LADCO September 27, 2000 report "Technical Support Document—Midwest Subregional Modeling: Emissions Inventory," (the main technical support document for the State's ozone attainment demonstration) included NO<sub>x</sub> emission growth estimates reflecting the assumed source growth in Illinois' NO<sub>x</sub> emissions budget established under EPA's NO<sub>x</sub> SIP Call. In adding the NO<sub>x</sub> emissions from permitted peakers explicitly to the future (2007) NO<sub>x</sub> emissions as a test of source growth impacts conducted for the December 2000 submittal, Illinois effectively "double counted" NO<sub>x</sub> emissions growth resulting from new peakers since some of the NO<sub>x</sub> emissions growth had already been accounted for in the modeling reflected in the September 27, 2000 report. Therefore, the State took a conservative approach to modeling new source impacts.

Second, any utility seeking a new source permit will be required to comply with Illinois' Electrical Generating Unit (EGU) NO<sub>x</sub> rule developed and adopted by the State to comply with EPA's NO<sub>x</sub> SIP Call.

Review of the NO<sub>x</sub> source data supplied by the Chicago Legal Clinic (CLC) and the American Lung Association (ALA) coupled with a review of the State's EGU NO<sub>x</sub> rule (signed by the EPA for final approval on September 25, 2001 and undergoing separate rulemaking) shows that all of the new generating units undergoing permit review will be subject to the requirements of the State's EGU NO<sub>x</sub> rule. The NO<sub>x</sub> emission totals from these new sources will not increase unconstrained, and Illinois' statewide NO<sub>x</sub> emissions, following the 2004 implementation of the State's EGU NO<sub>x</sub> rule, will not be allowed to increase above the NO<sub>x</sub> emissions budget level specified in EPA's NO<sub>x</sub> SIP Call.<sup>15</sup> The new peaker units will be given a limited number of emission allowances compatible with the State's NO<sub>x</sub> emissions budget, and will have to further control their emissions or will have to purchase available emission allowances from other sources, thus reducing NO<sub>x</sub> emissions from existing sources.

Third, it is not clear that Illinois' approach has significantly underestimated the additional NO<sub>x</sub> emissions resulting from the "new" utilities. Several of the new utilities considered by the IEPA have dropped plans for construction. A number of other utilities given permits and considered by Illinois have yet to initiate construction. It is quite possible that some of these facilities will be replaced by other facilities that are now pursuing source permits and that were not considered in the IEPA analysis. In addition, Illinois made the assumption that all of the modeled new utilities would be operating simultaneously at 100 percent capacity. This assumption is overly conservative since these units would not actually be operating at 100 percent capacity all of the time, leading to an overestimation of the modeled NO<sub>x</sub> emissions.

Given the current flux in electrical power generation and the changes in electricity demand, it is generally impossible for the State to project the growth in NO<sub>x</sub> emissions resulting from the new utilities with complete certainty. One way to mitigate this problem is to occasionally reassess the projected NO<sub>x</sub> emissions against changing historical source emission

records. This is the function of the MCR, that the State has committed to perform in 2004 after the implementation of the rules required by EPA's NO<sub>x</sub> SIP Call. Projections of 2007 emissions can be reassessed with up-to-date information at that time and any adjustments that are necessary can be made to the SIP. However, based on the information now available to the State, EPA believes that potential growth in emissions from these peaker units was adequately accounted for in the submitted attainment demonstration.

#### *Comment 24*

A commenter states that Illinois' ozone modeling fails to address serious and substantial omissions in Illinois-issued source permits for peaker startup periods, when the NO<sub>x</sub> emission rates for the peakers are at their highest levels. Consequently, the commenter asserts that IEPA's ozone modeling is inadequate and cannot form a credible basis for the proposed SIP revisions. The commenter further points out that startup emissions from peakers are inadequately regulated under Illinois' permit process and existing emission control regulations. Therefore, peaker emission rates and peak ozone projections are underestimated. Review of the source permit records shows that startup emissions have not been included in the source emissions to be permitted and are not expected to be monitored for a number of the NO<sub>x</sub> sources undergoing permit review for the Chicago area. Thirteen out of the eighteen construction permit records reviewed did not contain language providing for startup emissions to be included in the sources' annual emission totals.

The commenter notes that IEPA's handling of permits for peakers is inconsistent in the treatment of startup emissions. Some sources have been given permits regulating startup emissions and other sources have been given permits not addressing startup emissions. This inconsistent treatment of startup emissions is of particular concern with respect to "synthetic minor" sources, which are held to less stringent emissions control standards based on emissions estimates in individual permits. These factors, combined with the NO<sub>x</sub> waiver, indicate that IEPA's current permitting procedures may not be sufficient to ensure attainment of the ozone standard in the Chicago area.

The commenter cites the case of *Michigan v. Browner*, 230 F.3d 181 (6th Cir. 2000) as providing insight on whether the IEPA must require enforceable standards regarding excess

<sup>15</sup> Although interstate NO<sub>x</sub> emissions allowance trading is allowed under the NO<sub>x</sub> SIP Call, most NO<sub>x</sub> SIP Call States will need to seek significant NO<sub>x</sub> emission reductions from their own sources. Interstate NO<sub>x</sub> emission allowance trades will probably be kept to a minimum because available emission reduction allowances are expected to be in short supply and most States are expected to encourage intra-state trades.

startup emissions in peaker plant permits. In that case, the Court upheld EPA's rejection of revisions to Michigan's SIP based, in part, on a February 15, 1983 EPA memorandum by Kathleen Bennett, then Assistant Administrator for Air, Noise, and Radiation at the EPA (a copy of this memorandum was attached to the commenter's letter). The memorandum clarified EPA's position on excess emissions during startup, shutdown, maintenance, and malfunctions.

The commenter notes that the construction permits reviewed for the Chicago nonattainment area reveal gaps in regulating peaker plants. Specific provisions in the permits regarding startup emissions are inconsistent, and reflect no clear standard for ensuring that peaker plants are permitted according to current law. The language used by the IEPA for regulating startup emissions appears to violate the law according to *Michigan v. Browner*, which requires regulatory agencies to maintain enforcement discretion regarding excess emissions at startup and shutdown. The commenter notes that this fact, combined with the NO<sub>x</sub> waiver, shows that IEPA's current permitting procedures may not be sufficient to ensure that attainment of the ozone standard will occur in the Chicago area.

#### Response 24

The commenter appears to make three general points. First, the commenter raises the concern that the ozone modeling does not account for emissions from peaker units during start-up. Second, the commenter raises the concern that the State is treating different peaker units in different manners during the permitting process—placing limits on some source regarding start-up emissions, but not on others. Finally, the commenter claims that, under EPA policy, it is improper to allow start-up emissions to exceed the otherwise applicable emission limits.

It seems appropriate to first address the commenter's second concern about the State's implementation of its new source permitting rules. This comment is outside of the scope of EPA's current action. EPA has previously approved the permitting program that the State is operating under and has not re-opened that approval here. The commenter seems concerned either that there is a flaw in the approved program or that the State is implementing the permitting program in a manner which is inconsistent with the approved SIP. In either case, the commenter should work with the State and/or EPA outside the context of this rulemaking to ensure that

the program is either appropriately modified or implemented in a manner consistent with the approved plan. However, EPA notes that review of the data supplied by the commenter shows that the State has generally regulated startup emissions from larger units and units that generally use fuels other than natural gas. Because these types of units would have significantly and proportionately higher startup emissions occurring over larger time periods than natural gas-fired peaker units, the State's different treatment of these sources does not seem inappropriate.

With respect to the commenter's third concern, including its analysis of EPA's policy on startup emissions and its summary of the *Michigan* case, EPA disagrees with the commenter. In the *Michigan* case, the Court upheld EPA's disapproval of a SIP rule which provided "broad exclusions from compliance with emission limitations during [startup, shutdowns, and malfunction] periods \* \* \*" 230 F.3d at 185. In so doing, the Court ratified EPA's interpretation of section 110 of the CAA, as expressed in the Agency's long-standing policy (which we reiterated in 1999).<sup>16</sup> The commenter does not assert that the Illinois SIP contains such a provision. EPA's policy further provides that, as an enforcement matter, emissions in excess of otherwise applicable SIP limits should be considered violations, unless (as is relevant here) such emissions are provided for in the SIP and their impact on attainment is considered. To the extent that this policy is relevant to EPA's action on Illinois' ozone attainment demonstration, the commenter's first concern will be addressed—did the State consider whether these excess emissions would impair the area's ability to attain the ozone standard? We believe that the State did consider these emissions.

In order to provide a better explanation of the analysis performed by the State, we held a conference call with representatives of the IEPA on August 23, 2000. Discussed below are several important factors that were identified during the call and that demonstrate the State considered the potential significance of these excess emissions. Furthermore, as explained in the previous response, the State generally considered both new source growth—which would include new or

<sup>16</sup> On September 20, 1999, EPA issued a policy updating and clarifying the 1983 Bennett memoranda referenced by the commenter, entitled "State Implementation Plans (SIPs): Policy Regarding Excess Emissions During Malfunctions, Start-up, and Shutdown."

modified peaker units—and modeled NO<sub>x</sub> emissions consistent with an emissions "cap" that would apply to these and other sources.

(1) The startup periods for natural gas-fired peakers are relatively short, ranging from 6 to 30 minutes and typically on the order of 15 minutes. During the startups, NO<sub>x</sub> emissions are somewhat higher because fuels are typically heated before combustion. Nonetheless, increases in NO<sub>x</sub> emissions during startups for peakers using natural gas (most peakers are fired using natural gas, but some combined cycle systems do use other fuels) are proportionately smaller and of shorter duration than those for utility boilers fired with other fuels also undergoing startup.

(2) Peakers undergoing startup are not operating at peak loads; they generally are operating at 60 percent or lower loads versus higher loads during stable operation periods.

(3) Not all peakers would be undergoing startup at the same time, minimizing simultaneous buildups of NO<sub>x</sub> emissions resulting from startup at many peakers.

(4) Although the NO<sub>x</sub> emissions may be higher in concentration within stack emission plumes (higher in parts per million concentration [ppm]) during startup, the NO<sub>x</sub> emissions, when viewed as an hourly emissions rate, are not significantly higher during startup than during stable operation, particularly when compared to hourly NO<sub>x</sub> emission rates during peak loads at stable operation.<sup>17</sup>

(5) Excess emissions during startup are factored into each source's seasonal NO<sub>x</sub> emissions allowances under the NO<sub>x</sub> SIP Call emission control regulations (during the high ozone

<sup>17</sup> Based on information addressed in "In the Matter of: Natural Gas-Fired Peak-Load Electrical Power Generating Facilities (Peaker Plants) Docket No. R01-10: Companion Report to the Illinois Pollution Control Board's Informational Order of December 21, 2000" (incorporated into the docket for this final rule), pages 12 through 14, peaker NO<sub>x</sub> emissions during startup can reach a concentration of 200 ppm (when the peakers operate at less than 50 percent load capacity). Compare this to NO<sub>x</sub> emission concentrations of 10 to 30 ppm during full-load stable operation. The IEPA, however, notes that, in terms of hourly emission rates, the startup NO<sub>x</sub> emissions are not significantly higher than stable operation NO<sub>x</sub> emissions due to lower heat input during startups (due to lower system loads). For example, Continuous Emissions Monitoring Systems (CEMS) data for the Elwood Energy peaker unit show NO<sub>x</sub> emissions of 0.05 to 0.055 pounds per million Btu of heat input during stable operation versus 0.1 to 0.115 pounds per million Btu of heat input during startups and shutdowns. Due to the lower heat input rate during startups (the hourly Btu input rate during startups are half of that during full load under stable operations), the hourly NO<sub>x</sub> emission rates are virtually identical for both startups and stable operation modes for this facility.

season, June through August, emissions are capped). The modeled NO<sub>x</sub> emissions rates took these NO<sub>x</sub> emissions allowances into account, and, therefore, have incorporated the effects of excess startup emissions.

(6) Through permit provisions, IEPA requires peaker plants to implement measures to minimize emissions associated with the startup and shutdown.<sup>18</sup>

The suggestion that the State needs to model these emissions is not supported by EPA policy and available ozone modeling data. EPA's policy does not provide that a State needs to model startup emissions in order to consider their effect on attainment of the ozone standard. The modeling information available to the State and EPA indicates that it is not likely that the ozone modeling would recognize the impacts of short-term, localized startup emissions. Reviewing the available modeling data supplied by LADCO and the States, it is clear that the spatially graphed formats show very few recognizable "ozone plumes" despite the existence of a number of localized large NO<sub>x</sub> sources, such as major utilities. If these large sources fail to cause a recognizable "ozone signature," it is highly unlikely that localized, temporary excess NO<sub>x</sub> emissions would produce a significant ozone signature. Thus, because startup emissions are not expected to produce discernable ozone signatures relative to the cumulative impacts of local and regional NO<sub>x</sub> emissions from all utilities, it was appropriate to conclude that modeling would not reliably indicate the effect of these startup emissions on attainment of the standard.

The State did consider the peaker emissions as part of its attainment analysis in two ways. As provided in more detail in the previous response, startup emissions must be factored in the sources' compliance with the State's NO<sub>x</sub> emission control regulations in compliance with the NO<sub>x</sub> SIP Call, i.e., the seasonal emission allowances under the State's NO<sub>x</sub> emissions cap. Startup emissions that cause the source to exceed its emission cap must be compensated for and mitigated by the source through the purchase of additional emission allowances from other sources or through additional emission controls at the sources themselves. Statewide emissions during the ozone season will not be allowed to exceed the emissions cap. The modeling

system correctly reflects the existence of this emissions cap, and translates this emissions limit into typical weekday NO<sub>x</sub> emission rates.

Also, new source growth was considered as part of the attainment analysis. To estimate future, attainment year emissions, the LADCO States included estimated source growth factors based on available source forecasting data along with estimated source control factors to calculate future emissions. This included growth estimates for NO<sub>x</sub> sources, including source growth for electrical generating units. In addition, Illinois modeled the NO<sub>x</sub> emission impacts of peakers already granted emission permits at the time of the preparation of the December 2000 attainment demonstration submittal. As noted elsewhere in this final rule, this approach provided a conservative estimate of the ozone impacts resulting from source growth in this source sector.

All of these observations together lead us to the conclusion that startup emissions from peakers will not result in a failure of the State to attain the 1-hour ozone standard by the attainment date. The State has not significantly underestimated future NO<sub>x</sub> emissions based on a failure to specifically consider peaker startup emissions.

#### *Comment 25*

A commenter notes that IEPA's permitting practices are of particular concern with respect to "synthetic minor" sources, which are held to lower emission control standards based on emissions estimates in individual permits. IEPA's current permitting procedures may not be sufficient to ensure that attainment of the ozone standard will be met in the Chicago area.

#### *Response 25*

As an initial matter, the State's emission growth estimates, which are considered in the ozone attainment demonstration, consider emission growth from all sources, not just those subject to nonattainment NSR review, major new sources or major modifications. Moreover, since all of these "synthetic minor" sources are, nonetheless, subject to the NO<sub>x</sub> emission control requirements of Illinois' EGU NO<sub>x</sub> rule, and since the total NO<sub>x</sub> emissions in Illinois are capped by EPA's NO<sub>x</sub> SIP Call, the fact that these sources are treated as "synthetic minors" is of no consequence for the ozone attainment demonstration. The attainment demonstration assumed that the NO<sub>x</sub> emissions in Illinois would be at the cap-allowed levels

under the NO<sub>x</sub> SIP Call. Assuming that future NO<sub>x</sub> emissions are at these levels, even the new "synthetic minor" NO<sub>x</sub> sources subject to the State's NO<sub>x</sub> rules would have to obtain NO<sub>x</sub> emission allowances from existing sources through trades, and NO<sub>x</sub> emissions in total in Illinois would not increase. Therefore, emissions from these smaller sources do not jeopardize the ozone attainment demonstration.

#### *Comment 26*

A commenter believes that the Illinois Pollution Control Board (IPCB) agrees that peaker plants in Illinois are inadequately regulated. The commenter asserts that, even if the NO<sub>x</sub> waiver is not revised to remove the NSR exemption, it should be amended to incorporate the IPCB's recommendations for NO<sub>x</sub> emission controls on peaker units. To support this comment, the commenter notes that, in December 2000, the IPCB issued an informational order in which it described its findings with respect to the regulation of peaker plants (the commenter attached a copy of the IPCB informational Order to their comment letter). The commenter requests the incorporation of the entire IPCB docket for this December 2000 informational order into the record for this rulemaking.

The commenter notes that the IPCB found that peaker plants are unique. They emit most of their permitted annual amount of emissions during a concentrated period of time, which generally coincides with the summer months when the ozone risk is the greatest. The IPCB recommended the development of Best Available Control Technology (BACT) standards for all new peaking units. The IPCB noted that this level of emissions control was appropriate to prevent violations of the air quality standards. The IPCB also concluded that new gas turbines with readily available, reliable emission control technology can routinely achieve very low emission rates. These emission rates are much lower than the applicable technology-based emission limitation now in effect for most new peakers in Illinois, which the IPCB characterized as "potentially outdated NSPS" (New Source Performance Standards). The IPCB recommended that IEPA develop a rulemaking proposal to implement BACT for peaker plants in Illinois. To date, this recommendation has been ignored by the IEPA.

Based on these and other observations, the commenter asserts that the revocation of the NO<sub>x</sub> waiver for all new sources (or for peaking units

<sup>18</sup> "In the Matter of: Natural Gas-Fired, Peak-Load Electrical Power Generating Facilities (Peaker Plants) Docket No. R01-10: Companion Report to the Illinois Pollution Control Board's Informational Order of December 21, 2000," page 14.

specifically) is the best means to accomplish attainment of the NAAQS. As an alternative, however, the commenter requests the EPA to require Illinois to take any and all steps necessary to fulfill the recommendations of the IPCB for BACT emission controls on peaking units. This can be accomplished by changing EPA's proposed revision to the NO<sub>x</sub> waiver to incorporate the IPCB's BACT recommendation.

#### *Response 26*

The IPCB peaker hearing docket website referenced by the commenter was reviewed for relevant documents. Many documents referenced on this website have no bearing on the issue at hand, the approvability of Illinois' ozone attainment demonstration and the validity of the existing NO<sub>x</sub> waiver. Therefore, we are not including all of the IPCB hearing record documents in the docket for this final rule as requested by the commenter. Two documents, however, are relevant to this final rule and are incorporated into the docket for this final rule. These two documents have been downloaded from the IPCB website, and are the following:

(1) The December 21, 2000 Informational Order of the Board In the Matter Of: Natural Gas-Fired, Peak-Load Electrical Power Generating Facilities (Peaker Plants), IPCB Docket No. R01-10; and (2) the "Companion Report to the Illinois Pollution Control Board's Informational Order of December 21, 2000: In the Matter Of: Natural Gas-Fired, Peak-Load Electrical Power Generating Facilities (Peaker Plants) Docket No. R01-10." The first document specifies the IPCB's conclusions regarding peakers, and the second document summarizes public comments and IEPA responses collected during a series of State hearings concerning peakers.

As noted by the commenter, the IPCB has recommended that the IEPA pursue new source permitting regulation variations to require BACT emission controls for all peakers seeking new source permits. In addition, the IPCB found that peakers do emit most of their ozone precursor (VOC and NO<sub>x</sub>) emissions during relatively short periods that coincide with the high ozone periods of each year. With regard to peaker air emissions, only NO<sub>x</sub> emissions are considered to be significant. Most peaker plants are being sited as "minor" sources, with annual NO<sub>x</sub> below 250 tons per year. Information contained in the Companion Document supports the IPCB's conclusions.

The information provided in these documents may support a revision of permitting requirements for these sources. This information, however, is generally not relevant to a decision on the State's ozone attainment demonstration, at issue here, or is not of a sufficient nature to cause us to reverse our approval of the ozone attainment demonstration. The information provided in the IPCB documents do not support a case that future NO<sub>x</sub> emissions will increase above projected attainment levels contained in the State's ozone attainment demonstration. It is again noted here, as elsewhere in this final rule, that the peakers at issue here will be subject to the State's EGU NO<sub>x</sub> rule. Therefore, the total NO<sub>x</sub> emissions from these sources will be constrained by source-specific NO<sub>x</sub> emission limits specified by the State under the State's NO<sub>x</sub> emissions cap. Since this emissions cap has been factored into the State's ozone attainment demonstration, the State's current source permitting practices for peakers does not jeopardize the State's ozone attainment demonstration as approved in this final rule.

With regard to the NO<sub>x</sub> waiver, based on the State's cap on NO<sub>x</sub> emissions and the incorporation of this emissions cap in the modeled emissions in the ozone attainment demonstration, it must be concluded that the NO<sub>x</sub> waiver, as it currently stands, should be continued based on section 182(f)(2) of the CAA. As noted elsewhere in this final rule, this section of the CAA provides for a NO<sub>x</sub> waiver based on a prevention of "excess" NO<sub>x</sub> emission controls. The conclusion that the current permitting practices for peakers does not threaten the ozone attainment demonstration approved here supports the continuance of the existing NO<sub>x</sub> waiver, and we see no basis, given the information provided in the IPCB hearing documents reviewed here, that the NSR portion of the NO<sub>x</sub> waiver should be discontinued.

#### *Comment 27*

A commenter notes that the EPA proposed rule never directly addressed the scientific credibility of the NO<sub>x</sub> waiver in light of the subsequently issued Ozone Transport Assessment Group (OTAG) findings. (OTAG, made up of representatives of the States in the eastern half of the United States, EPA, industry, academia, and environmental organizations, was created to consider the causes of ozone transport. EPA relied on many of the OTAG findings in issuing the NO<sub>x</sub> SIP Call.) The OTAG findings appear to discredit the scientific basis for the NO<sub>x</sub> waiver.

More specifically, among the conclusions reached by OTAG are that:

1. Regional NO<sub>x</sub> reductions are effective in producing ozone benefits;
2. The more NO<sub>x</sub> emissions reduced the greater the ozone benefit;
3. Ozone benefits are greatest in the subregions where emissions reductions are made;
4. Although decreased with distance, there are also ozone benefits outside of the subregions where emission reductions are made;
5. Both tall stack and low-level NO<sub>x</sub> emission reductions are effective;
6. Air quality data indicate that ozone is pervasive, is transported and, once aloft, is carried over and transported from one day to the next;
7. The range of transport is generally longer in the North; and
8. NO<sub>x</sub> controls on utilities are recommended for states in much of the OTAG region (which includes the Chicago-Gary-Lake County ozone nonattainment area).

As EPA itself acknowledged in the framing of the NO<sub>x</sub> SIP Call, the OTAG findings are especially critical in analyzing the regional impacts of NO<sub>x</sub> transport. Both the NO<sub>x</sub> SIP Call and the OTAG findings underscore the importance and cost-effectiveness of NO<sub>x</sub> emission reductions as an attainment strategy, especially when compared and contrasted to VOC-based strategies, which tend to be more expensive and local in their impact. Both the OTAG findings and the NO<sub>x</sub> SIP Call were made without the reference to the unchecked proliferation of the new NO<sub>x</sub> sources. Therefore, there is a compelling basis for the EPA to reconsider the NO<sub>x</sub> waiver it conditionally granted in 1996.

The commenter asserts that, in light of the OTAG findings, the NO<sub>x</sub> waiver cannot survive any good faith effort by the EPA to measure the scientific basis of the NO<sub>x</sub> waiver. The commenter requests the EPA to conduct this analysis as part of its final review of the NO<sub>x</sub> waiver petition and its SIP revisions.

#### *Response 27*

OTAG concluded that reduction of regional NO<sub>x</sub> emissions would reduce downwind ozone concentrations on a regional basis. The OTAG results, however, also noted that NO<sub>x</sub> emission reductions have a mixed impact on local ozone concentrations. They concluded that, due to ozone scavenging by NO<sub>x</sub>, controlling NO<sub>x</sub> emissions can be locally beneficial or dis-beneficial. Review of the available OTAG data shows the lower Lake Michigan area as having the most significant ozone dis-

benefits as a result of possible NO<sub>x</sub> emission reductions (ozone benefits were modeled on some days under some NO<sub>x</sub> reduction scenarios, but greater ozone dis-benefits were noted on locally higher ozone days).

Nonetheless, it should be noted that the July 11, 2001 proposed rule (66 FR 36396) proposed to change the basis for the continuance of the NO<sub>x</sub> waiver from an ozone benefit/dis-benefit basis to an avoidance of excess NO<sub>x</sub> emissions reduction basis under section 182(f)(2) of the CAA. Since the State has demonstrated attainment of the 1-hour ozone standard without the use of all possible NO<sub>x</sub> emission controls, the State, under section 182(f)(2) of the CAA, qualifies for a NO<sub>x</sub> emissions control waiver for those NO<sub>x</sub> controls not relied on in the ozone attainment demonstration. Since the State does not rely on NO<sub>x</sub> emission reductions from NO<sub>x</sub> RACT, NO<sub>x</sub> NSR, and certain mobile source emission controls under I/M and conformity in the ozone attainment demonstration (assuming the attainment demonstration is approved, as discussed below) for the Chicago-Gary-Lake County ozone nonattainment area, the area qualifies for a waiver of these NO<sub>x</sub> emission controls. A NO<sub>x</sub> emissions control waiver under this basis is independent of the ozone impacts of these controls provided that the State can demonstrate attainment of the ozone standard without the use of these emission controls. Therefore, even if ozone control benefits are achievable from some of these NO<sub>x</sub> controls, this is not a basis for denying or withdrawing the NO<sub>x</sub> waiver for these emission control measures.

#### Comment 28

A commenter asserts that the Clean Air Act specifically designates the EPA Administrator as being responsible to respond to NO<sub>x</sub> waiver petitions. The commenter questions what authority, if any, the Regional Administrator has to issue a decision on the NO<sub>x</sub> waiver petition? The commenter requests the EPA to identify the authority by which the section 182(f)(3) NO<sub>x</sub> waiver petition is being decided by anyone other than the Administrator. In the absence of this authority, the commenter contends that the decision of the Regional Administrator on the NO<sub>x</sub> waiver petition is invalid on its face.

#### Response 28

On October 10, 2001, Administrator, Christine Todd Whitman, delegated authority to Deputy Regional Administrator David A. Ullrich, Region 5 of the EPA, to sign final rulemakings concerning revision of NO<sub>x</sub> waivers and

responding to NO<sub>x</sub> waiver petitions for Illinois, Indiana, and Wisconsin in today's actions.

#### Comment 29

A commenter expresses concerns about substitution of NO<sub>x</sub> emission reductions to meet VOC emission reduction requirements in Rate-Of-Progress (ROP) plans. The commenter asserts that the CAA expressly forbids the use of NO<sub>x</sub> substitution for ROP VOC emission reduction requirements. The commenter references an April 3, 2000 letter sent by the commenter to the EPA regarding this issue.

#### Response 29

On March 3, 2000, we published a proposed rule (65 FR 11525) regarding Illinois' post-1996 ROP plan for the Chicago portion of the Chicago-Gary-Lake County ozone nonattainment area. The April 3, 2000 letter referenced by the commenter was submitted as a response to the March 3, 2000 proposed rule. We addressed the commenter's comments in a December 18, 2000 final rule (65 FR 78961) on the post-1996 ROP plan. To elaborate on the new comment summarized here and for the purpose of interpreting and responding to the commenter's concerns, some of the commenter's prior arguments regarding this issue are summarized and again responded to here (the commenter did not elaborate on the exact basis for their comment in the more current comment letter addressed here).

In their April 3, 2000 comment letter, the commenter noted that they believe that the CAA prohibits NO<sub>x</sub> reductions from outside of the Chicago ozone nonattainment area from being claimed as creditable ROP emission reductions under the post-1996 ROP plan.<sup>19</sup> The commenter notes that section 182(c)(2)(B) of the CAA states that the post-1996 ROP plan shall reduce by 9 percent "baseline emissions," as described in section 182(b)(1)(B) of the CAA. Section 182(b)(1)(B) of the CAA, in turn, defines "baseline emissions" to mean the total amount of actual VOC or NO<sub>x</sub> emissions from all anthropogenic

<sup>19</sup> Since the post-1999 ROP plan addressed in the July 11, 2001 proposed rule (66 FR 36370) was developed under the same CAA requirements and EPA policy covering the post-1996 ROP plan as addressed in the March 3, 2000 proposed rule, it is assumed that the commenter is trying to extend their prior comments on the post-1996 ROP plan and the associated March 3, 2000 proposed rule to the post-1999 ROP plan and the associated July 11, 2001 proposed rule. Both the post-1996 ROP plan and the post-1999 ROP plan rely on the substitution of NO<sub>x</sub> emission reductions from outside of the Chicago ozone nonattainment area, but within Illinois, to meet part of the VOC emission reduction requirements for the ROP plans. It is this substitution to which the commenter refers.

sources in the nonattainment area during 1990, excluding emissions reduced by pre-1990 vehicle emissions regulations and 1990 gasoline volatility regulations. Based on section 182(b)(1)(B), the commenter asserts that, since baseline emissions under the CAA's definition reflect only VOC or NO<sub>x</sub> emissions within the ozone nonattainment area, and an ROP plan is to reduce emissions relative to the emission baseline, Illinois is prohibited from claiming NO<sub>x</sub> emission reductions from outside of the nonattainment area. We assume that the commenter is trying to express this same concern with regard to the post-1999 ROP plan, which also relies on NO<sub>x</sub> emission reductions from outside of the Chicago ozone nonattainment area.

As noted in the December 18, 2000 final rule (65 FR 78970), we disagree with the commenter. Claiming credit for NO<sub>x</sub> emission reductions occurring outside of the Chicago ozone nonattainment area is consistent with the CAA's requirements concerning ROP plans and NO<sub>x</sub> substitution.

The CAA's provision for NO<sub>x</sub> substitution in ROP plans is separate from the sections of the CAA focused on by the commenter. Section 182(c)(2)(B) of the CAA discusses the reduction of VOC emissions by a post-1996 ROP plan (and a post-1999 ROP plan). Section 182(c)(2)(C) of the CAA provides that NO<sub>x</sub> emission reductions can be substituted for or combined with VOC emission reductions to meet the ROP requirements under section 182(c)(2)(B). Section 182(c)(2)(C) does not state that such NO<sub>x</sub> emission reductions must come from "baseline emissions" as defined under section 182(b)(1)(B). Rather, section 182(c)(2)(C) defers to the EPA Administrator to determine "the conditions under which NO<sub>x</sub> emissions control may be substituted for VOC emissions control or may be combined with VOC emissions control in order to maximize the reduction in ozone air pollution." The only caveat to NO<sub>x</sub> substitution under section 182(c)(2)(C) is that NO<sub>x</sub> emission reductions claimed in the ROP plan, in combination with VOC emission reductions, "would result in a reduction in ozone concentrations at least equivalent to that which would result from the amount of VOC emission reduction required under section 182(c)(2)(B)." Accordingly, the CAA directs us to use our technical judgment to determine what types of NO<sub>x</sub> emissions control would be suitable for NO<sub>x</sub> substitution strategies under section 182(c)(2)(C).

As discussed in the December 18, 2000 (65 FR 78970) final rule on the

post-1996 ROP plan, we have made the technical determination that, for areas within the Ozone Transport Assessment Group (OTAG) fine grid modeling domain, which includes the Chicago ozone nonattainment area, upwind NO<sub>x</sub> emission reductions can result in reductions in ozone concentrations that are equivalent to results achievable from local VOC emission reductions. As discussed in the December 18, 2000 (65 FR 78970) final rule, we provided Illinois with guidance on how to establish VOC/NO<sub>x</sub> emission reduction equivalency with respect to upwind NO<sub>x</sub> emission reductions, and the State appropriately followed that guidance in the preparation of both the post-1996 ROP plan and the post-1999 ROP plan. The State ozone modeling, reviewed in the July 11, 2001 proposed rule (66 FR 36370), shows that upwind NO<sub>x</sub> emissions significantly contribute to high ozone concentrations in the Chicago area. The available modeling supporting the attainment demonstration shows that, even if the Chicago area reduces VOC emissions significantly beyond current levels, the area would not achieve modeled attainment of the 1-hour ozone standard without reduction of upwind NO<sub>x</sub> emissions. These findings are consistent with the results of OTAG's study of the impact of regional NO<sub>x</sub> emissions on ozone nonattainment areas. Moreover, the State submitted, in conjunction with the post-1999 ROP plan and the associated ozone attainment demonstration, modeling results from LADCO and from OTAG to demonstrate that upwind NO<sub>x</sub> emission reductions do reduce ozone concentrations in the Chicago area. All of this is consistent with guidance in an EPA December 29, 1997 policy, which explains the conditions under which a NO<sub>x</sub> waived area may claim ROP credit for upwind NO<sub>x</sub> emission reductions. Therefore, ROP credit for upwind NO<sub>x</sub> emission reductions is consistent with section 182(c)(2)(C) of the CAA.

Furthermore, where, as here, EPA is also approving a modeled attainment demonstration as providing for attainment of the ozone standard as expeditiously as practicable and is determining that the State has met its obligation to include in its SIP submittal all reasonably available control measures, the mix of NO<sub>x</sub> and VOC controls relied upon to satisfy the ROP obligation is appropriate. With this action today, EPA is determining that there are no additional VOC controls that satisfy the criteria of RACM and that the plan submitted by the State provides for attainment as expeditiously

as practicable. Consequently, the mix of NO<sub>x</sub> and VOC measures relied upon by the State in its submittal will result in the reduction in ozone concentrations needed to attain the standard as expeditiously as practicable and is at least equivalent to any other mix of NO<sub>x</sub> and VOC emission controls in terms of meeting that objective.

#### *Comment 30*

A commenter disagrees with the EPA assertion (in the July 11, 2001 proposed rule) that the Illinois submission adequately demonstrates attainment of the 1-hour ozone standard by November 15, 2007 within the Chicago ozone nonattainment area.

#### *Response 30*

This comment is indirectly responded to through our responses to the comments below. We find that none of the following comments or those from other commenters responded to in this final rule are sufficient in nature to cause us to reverse our decision to approve Illinois' ozone attainment demonstration for the Chicago ozone nonattainment area.

#### *Comment 31*

A commenter notes that EPA stated in the proposed rule that the ozone modeling system used by Illinois and other LADCO States seems to over-predict nighttime ozone concentrations and to under-predict daytime ozone concentrations, but performs within acceptable limits. At the monitoring sites with high measured ozone concentrations, the mid-afternoon modeled ozone concentrations are "low." This means that the modeling system is under-predicting ozone levels precisely when public activity and actual exposure to ozone is at its greatest. The commenter notes that even LADCO has indicated that "Given the model's tendency to underestimate peak concentrations, however, it should be understood that the modeled attainment demonstration provides no margin of safety."

The fact that EPA recognizes that peak modeled ozone concentrations over Lake Michigan are underestimated should also be of concern.

#### *Response 31*

LADCO and EPA acknowledge that the modeling system does underestimate peak observed ozone concentrations on some selected episode days. It should be noted, however, that the modeling system also overestimates peak ozone concentrations on some of the modeled episode days. Review of Table 2 of

LADCO's September 27, 2000 attainment demonstration documentation, titled "Technical Support Document—Midwest Subregional Modeling: 1-Hour Attainment Demonstration for Lake Michigan Area," which is the main support document for Illinois' submitted attainment demonstration, shows that the modeling system's performance varies from day-to-day. This table clearly indicates the model's underestimation of peak ozone concentrations on certain days, but also shows that the model overestimates peak ozone concentrations on other days, including days with monitored ozone standard exceedances. For example, on July 20, 1991 (one of the critical days in the ozone attainment demonstration driving the selection of emission control measures), the modeling system overpredicts the peak ozone concentration by 20.9 percent.

Although the modeling system is not perfect in modeling observed ozone concentrations, the model is performing acceptably within EPA's recommended performance limits (also shown in Table 2 of LADCO's September 27, 2000 technical support document). As noted in the July 11, 2001 proposed rule (cite), the ozone modeling system passed EPA's recommended system performance statistics on the modeled episode days selected by LADCO, and, therefore, the modeling system is acceptable for use in demonstrating attainment of the ozone standard.

#### *Comment 32*

A commenter notes that Illinois failed to demonstrate attainment of the ozone standard based on the deterministic test, and had to rely on the statistical test to demonstrate attainment of the 1-hour ozone standard. The State modeled the ozone impacts of additional NO<sub>x</sub> emissions to consider the possible ozone impacts of new EGUs already granted source permits. This pushed the predicted peak ozone concentrations to 130 parts per billion (ppb), the maximum allowed under the statistical test criteria for the modeled worst-case period. Given that the modeling system is likely to underestimate the peak ozone concentrations, this raises serious questions about the validity of the modeled attainment demonstration.

#### *Response 32*

As noted above, the modeling system has been determined to be performing acceptably based on EPA's recommended criteria. The modeling system, therefore, is acceptable for testing the impacts of various emission control strategies and the demonstration



of attainment. The model may be used without further adjustment or use of calibration factors.

As noted elsewhere in this final rule, the IEPA took a very conservative approach in adding the NO<sub>x</sub> emissions for the newly permitted EGUs. Since these EGUs must meet the requirements of the State's EGU NO<sub>x</sub> rule and the State must meet the requirements of EPA's NO<sub>x</sub> SIP Call, the NO<sub>x</sub> emissions from these new EGUs can not cause the NO<sub>x</sub> emissions in Illinois to exceed the NO<sub>x</sub> emissions budget assigned to Illinois under the NO<sub>x</sub> SIP Call. The ozone attainment demonstration, prior to the addition of the NO<sub>x</sub> emissions from the new EGUs, included the modeling of NO<sub>x</sub> emissions meeting the NO<sub>x</sub> SIP Call and included NO<sub>x</sub> emission growth estimates through 2007. The addition of NO<sub>x</sub> emissions for the new EGUs to the modeled NO<sub>x</sub> emissions is conservative because some of the new NO<sub>x</sub> emissions were already accounted for in the modeled emissions growth estimates. Despite this conservative approach, the State continued to model peak ozone concentrations within the acceptable limits of the statistical test. Therefore, attainment of the ozone standard continues to be modeled by the State. In addition, note that other WOE tests also support the adequacy of the modeled attainment demonstration.

Although the deterministic test was not passed by the selected emissions control strategy, the same control strategy did pass the statistical test. If either test is passed, the attainment demonstration is found to be acceptable based on EPA's current policy (discussed in detail in the July 11, 2001 proposed rule (66 FR 36370). Therefore, we continue to find Illinois' modeled attainment demonstration to be acceptable.

#### *Comment 33*

A commenter notes that the IEPA has failed to keep the EPA abreast of additional NO<sub>x</sub> emissions not included in the submitted attainment ozone modeling that should be considered in evaluating whether the Chicago area will actually attain the ozone standard in 2007. The additional NO<sub>x</sub> emissions from new sources will produce higher peak ozone levels than have already been predicted. To not include the additional known Illinois-permitted facilities, as well as emissions sources reasonably foreseen by the attainment year, provides a deliberate under-representation of expected attainment year emissions, and consequently, ozone levels.

#### *Response 33*

As noted elsewhere in this final rule, the new EGUs referred to by the commenter must comply with the requirements of the State's EGU NO<sub>x</sub> rule and with the NO<sub>x</sub> emissions budget specified for Illinois under EPA's NO<sub>x</sub> SIP Call. By 2004 and later, these new sources will have to obtain sufficient NO<sub>x</sub> emissions allowances, from the State's New Source Set Aside (NSSA) or from allowance trades from existing sources, to operate under Illinois' NO<sub>x</sub> emissions budget.

Since the ozone attainment demonstration was developed to reflect the impacts of the NO<sub>x</sub> SIP Call and the new sources must not cause Illinois NO<sub>x</sub> emissions to exceed the State's NO<sub>x</sub> emissions budget, it is concluded that the new EGUs will not cause total NO<sub>x</sub> emissions in Illinois to exceed future NO<sub>x</sub> emission levels supported in the State's modeled ozone attainment demonstration.

Also as noted elsewhere in this final rule, concerns about the impacts of new EGUs will be addressed to some extent when the State performs an MCR in 2004. By that time, the State will have a better idea about the likely NO<sub>x</sub> emissions in 2007 and will be able to better address the impacts of the NO<sub>x</sub> SIP Call. At that time, the State will be in a better position to assess the probable impact of new source growth on the attainment of the 1-hour standard by the attainment deadline of 2007, and will be able to take corrective actions if found to be necessary.

#### *Comment 34*

A commenter notes that EPA's conclusion that IEPA's modeling of additional NO<sub>x</sub> emissions due to new permitted EGUs is conservative is contradicted by the IEPA's response to the public during hearings on the ozone attainment demonstration. The attainment demonstration implies that NO<sub>x</sub> emission allocations to new sources will significantly exceed the NO<sub>x</sub> allocations to be granted to new sources under the State's NO<sub>x</sub> SIP Call emission control regulations. This implies that new sources will have to buy NO<sub>x</sub> emission reduction credits from other States, leaving in-State NO<sub>x</sub> emissions higher than anticipated in the modeling. The State has admitted during the public hearings that some electrical generators will have to purchase NO<sub>x</sub> emission allowances from out-of-state sources.

To the commenter, it appears that the combination of Illinois deregulation of the electrical generating sector, the ease of siting new generation facilities

relative to neighboring states, and the constraints on new generators based on the minimization of the NSSA component in the Illinois NO<sub>x</sub> EGU rule is setting up a situation where significant numbers of NO<sub>x</sub> emission allocations will be imported into the State.

#### *Response 34*

The premise of this comment is that new EGUs will be forced to seek traded NO<sub>x</sub> emission allowances to comply with Illinois' EGU NO<sub>x</sub> rule and that these sources will predominantly be forced to obtain these traded NO<sub>x</sub> emission allowances from sources outside of the State of Illinois. We disagree with portions of this premise. Although some new EGUs may be forced to obtain NO<sub>x</sub> emission allowances from existing sources, assuming that the NSSA is inadequate to accommodate all new EGU NO<sub>x</sub> emissions, it is not clear that these sources will be forced to obtain all of these emission credits from outside of Illinois. It is just as likely that they will be able to obtain some of the needed NO<sub>x</sub> emission allowances from sources within Illinois itself. To that extent, Illinois NO<sub>x</sub> emissions will not rise above levels anticipated in the ozone attainment demonstration. In addition, if the sources obtain the NO<sub>x</sub> emission allowances from States surrounding Illinois and upwind of Illinois (Alabama, Indiana, Kentucky, and Tennessee NO<sub>x</sub> emissions were found to contribute to high ozone concentrations in the Chicago area in analyses supporting EPA's NO<sub>x</sub> SIP Call), this will lead to lowered background ozone concentrations in the Chicago area. Note that it is a key conclusion of EPA's NO<sub>x</sub> SIP Call that the lowering of regional, statewide NO<sub>x</sub> emissions in certain States will lower ozone and precursor transport into downwind ozone nonattainment areas. Therefore, emission reduction trading between States may support attainment of the ozone standard in the Chicago area and in other ozone nonattainment areas.

It is difficult for Illinois or any other State to model the impacts of emissions allowance trading in the advance of the implementation of such trading, but there is no indication that emissions trading will significantly alter the modeled results. This problem will be resolved to some extent when the State conducts the MCR in 2004, after the implementation of the NO<sub>x</sub> control rules under EPA's NO<sub>x</sub> SIP Call. By that time, the State will be able to assess the impacts of NO<sub>x</sub> allowance trading on emissions in Illinois and in surrounding States.



With regard to the ease of siting of new EGUs in Illinois versus in surrounding States, it is unclear what basis the commenter has to make such an assertion. Under the NO<sub>x</sub> waiver, Illinois may apply the same major source NO<sub>x</sub> emission cutoff (the new source emission level above which BACT is required) for new source review as applied in surrounding areas that are classified as attainment for ozone. Based on the ozone designations and classifications only, it is not clear that Illinois would present an easier placement area for new NO<sub>x</sub> sources. The new source NO<sub>x</sub> emissions cutoffs in Illinois and in the surrounding States, with the exception of the Metro East/St. Louis ozone nonattainment area, which has a tighter new source NO<sub>x</sub> emissions cutoff, are identical since most of these surrounding areas are designated as attaining the 1-hour ozone standard. Therefore, on an air quality basis, Illinois is not necessarily an easier area for siting new sources.

It should also be noted that other States are also subject to the requirements of the NO<sub>x</sub> SIP Call. NO<sub>x</sub> sources in these States will also be subject to significant NO<sub>x</sub> emission reduction requirements and may be allowed to meet these requirements by purchasing NO<sub>x</sub> emission allowances from other sources. Some of these sources may seek out NO<sub>x</sub> emission allowances from sources in Illinois, reducing NO<sub>x</sub> emissions in Illinois itself.

#### *Comment 35*

A commenter notes that a number of EGUs not included in the submitted ozone modeling have been or may soon be granted emission permits. The potential additional generating capacity, excluding generating capacity for sources previously modeled that have dropped construction plans or have lost previously granted permits, is 13,238.6 megawatts (MW). This additional generating capacity within Illinois is equivalent to the 16,276 MW generating capacity that was modeled for potential new sources by Illinois in the submitted attainment demonstration, and that increased modeled peak ozone concentrations by 1 to 2 ppb during the worst-case modeled ozone period. In addition, it should be noted that the NO<sub>x</sub> emissions from these sources, peaking units, are expected to occur during the ozone season, when electrical demand and wholesale electrical prices are the greatest.

The commenter concludes that the potential extra NO<sub>x</sub> emissions from the expected new sources are sufficient to cause a failure of Benchmark 2 of the

ozone attainment demonstration's statistical test. The expected peak ozone concentrations for July 20, 1991, a "severe" ozone day, would be 131 to 132 ppb, above the 130 ppb that has been determined to be allowable for this day under the statistical test.

#### *Response 35*

As noted elsewhere in this final rule, the State must comply with the NO<sub>x</sub> emissions budget provided in EPA's NO<sub>x</sub> SIP Call. This means that new NO<sub>x</sub> sources required to comply with Illinois' NO<sub>x</sub> rules must obtain sufficient NO<sub>x</sub> emission allowances to allow the State to stay within the prescribed NO<sub>x</sub> emissions budget. Provided that these new sources will have to comply with Illinois' NO<sub>x</sub> EGU rule, their new emissions should not force statewide NO<sub>x</sub> emissions to go above levels supported by the State's ozone attainment demonstration.

In addition, it has also been noted elsewhere in this final rule and in the July 11, 2001 proposed rule that the State took a conservative approach in assessing the ozone impacts of new EGUs. The State modeled the impacts of new NO<sub>x</sub> emissions from the permitted EGUs that were already included to some extent in the source growth estimates of LADCO's ozone attainment demonstration modeling.

#### *Comment 36*

A commenter notes that, in the discussion of WOE, EPA notes that LADCO's additional test using the relative reduction factor approach finds a receptor with a derived ozone design value of 122 ppb. Considering that the UAM tends to underestimate 1-hour ozone concentrations, that, as EPA notes, the peak modeled ozone concentrations over Lake Michigan are underestimated on some days, and that there is significantly more electrical generating capacity and potential NO<sub>x</sub> emissions than previously modeled should lead EPA to discount this example as a component of a WOE argument.

#### *Response 36*

The bases for concern about this WOE argument have been addressed in responses to other comments in this final rule. Because these concerns appear to not be founded given the current facts, we do not agree that we should discount this WOE factor.

#### *Comment 37*

A commenter states that, although EPA notes (in the proposed rule) that the State appears to have taken emissions growth into consideration in

the post-1999 ROP plan, it is not at all clear that this has been done. The fact that more new source permits have been granted by the State would likely make the submission of additional documentation moot, as the increase in emissions would have increased the milestone emission totals. The fact that 17 permits for additional EGUs are in the permitting process by the State should be accounted for in future emissions growth estimates.

#### *Response 37*

The commenter is addressing the impacts of NO<sub>x</sub> growth from new EGUs, primarily peakers. It is noted that Illinois has addressed such source growth in the ozone attainment demonstration as noted elsewhere in this final rule.

With regard to the post-1999 ROP plan, it is noted that the State has considered the impacts of the NO<sub>x</sub> SIP Call NO<sub>x</sub> regulations in the projected statewide NO<sub>x</sub> emissions considered in the calculations for the substitution of NO<sub>x</sub> emission reductions to satisfy part of the VOC emission reduction requirements. The State has primarily accounted for NO<sub>x</sub> emissions that will meet the NO<sub>x</sub> emissions cap under the State's NO<sub>x</sub> regulations. Since new NO<sub>x</sub> emissions will not be allowed to cause the statewide NO<sub>x</sub> emissions to exceed this cap, new source growth not already characterized will not be such that this emissions cap will be exceeded. The post-1999 ROP plan already accounts for all of the NO<sub>x</sub> emissions that will be allowed for 2004 and later. Therefore, NO<sub>x</sub> emission increases due to EGU growth after this time period is not an issue.

#### *Comment 38*

A commenter believes that a MCR should be conducted now rather than waiting for several years. EPA should also request that Illinois commit to adopt additional emission controls for the purposes of attainment if the results of the MCR show that more NO<sub>x</sub> will be emitted in Illinois than the State NO<sub>x</sub> emissions budget allows.

#### *Response 38*

As noted elsewhere in this final rule, the MCR will be more robust if the State waits for additional years to better assess the impacts of emission controls on ozone levels. This can only be carried out to the extent that the timing of the MCR does not jeopardize the possibility for implementing corrective emission controls prior to the ozone attainment date if such are determined to be necessary through the preparation or review of the MCR. Conducting an

MCR for the Chicago area now would be premature and of little value for correcting future shortfalls in the States emissions control strategy.

At this time, the EPA is only requesting the States to commit to conduct a MCR and not to include in this MCR specific corrective emission controls. It is impossible at this time to anticipate the shortfalls in the State's emissions control strategy and to determine the specific emission controls needed to eliminate these shortfalls. The State and the EPA will consider possible emission control measures after the State has prepared the MCR and the EPA has reviewed the submitted MCR and found that additional emission controls are needed to attain the 1-hour ozone standard by the attainment date.

#### *Comment 39*

Although the State has reduced emissions claimed from Transportation Control Measures (TCMs) in future years, the commenter fails to understand how TCM emission reduction credits can be claimed prospectively. Enforceable rules to ensure that the TCM-based emission reductions claimed are actually achieved are not in place. The State is asking the EPA to trust it to find and document the needed emission reductions at some later date. This approach is not acceptable.

#### *Response 39*

EPA agrees with the commenter that credit cannot be given for TCMs which are not specifically identified and adopted and are, thus, not enforceable. Illinois currently has a number of TCMs approved into the SIP. These TCMs were approved into the SIP in two separate rulemaking actions (see 62 FR 66279 and 65 FR 78961). In each case, the TCMs submitted by Illinois met the required elements for approval of TCMs. These elements are: (1) A complete description of each measure, and, if possible, its estimated emissions reduction benefits; (2) evidence that each measure was properly adopted by a jurisdiction with legal authority to execute the measure; (3) evidence that funding will be available to implement each measure; (4) evidence that all necessary approvals have been obtained from all appropriate government offices; (5) evidence that a complete schedule to plan, implement, and enforce each measure has been adopted by the implementing agencies; and (6) a description of any monitoring program to evaluate each measure's effectiveness and to allow for necessary in-place corrections and alterations.

The approved TCMs already in the SIP are credited with a total VOC emission reduction of 4 tons per day in 2002. These TCMs have already been implemented, and, thus, are already achieving the credited VOC emission reductions.

However, the projections of VOC emission reductions from "future" TCMs which are not yet selected cannot be approved as part of the SIP. Illinois has estimated that TCMs will continue to be implemented and that new TCMs will generate additional VOC emission reductions. In their December 2000 submittal, Illinois estimates these future VOC emission reductions as 1 ton per day in 2005 and 2 tons per day in 2007. These projected VOC emission reductions from future TCMs are not being approved into the SIP in this action and cannot be approved until Illinois meets all of the requirements for approval of the associated TCMs into the SIP.

The fact that EPA is not approving the TCM emission reduction credits estimated by Illinois for 2005 and 2007 in the ROP plan does not change or reverse our approval of the post-1999 ROP plan and the ozone attainment demonstration for the Chicago nonattainment area. Tables VI and VIII in our July 11, 2001 proposed rule (66 FR 36370, 36388) demonstrate the ROP emission target levels and emission reductions for VOC that Illinois has achieved, indicating an excess of VOC emissions reductions in 2005 and 2007 greater than the 1 ton per day and 2 tons per day shortfalls resulting from not crediting the non-adopted TCMs. Also, Figure II-2 in Illinois' December 2000 ozone attainment demonstration and ROP plan submittal demonstrates that Illinois has excess VOC emission reductions in all ROP milestone years (2002, 2005, and 2007), sometimes in excess of 100 tons per day. The 1 ton per day and 2 ton per day of VOC emission reductions estimated for future, non-adopted TCMs which are not being credited for the SIP are more than compensated for by the "excess" of VOC emission reductions expected to occur by the milestone years. It should also be noted that the implementation of TCMs was not included in the adopted ozone attainment strategy, implying that future TCMs were not included in the attainment demonstration modeling. Thus, both the Illinois post-1999 ROP plan and the ozone attainment demonstration can be approved without these additional VOC emission reduction credits.

#### *Comment 40*

A commenter believes that there is double counting of TCM emission reduction credits in past ROP submissions. The State has claimed the same emission reductions as off-model credits and as modeled credits. As part of the transportation modeling, rail improvements would displace automobile traffic and improve traffic flow, hence reducing emissions from mobile sources within the transportation model. These emissions reductions have also been credited as off-model credits from implemented projects.

#### *Response 40*

In the ROP, Illinois does not double count the TCM reduction credits. This is because the vehicle miles of travel are estimated in the ROP submittal based on historical trends and ground counts from the Illinois highway monitoring system. The transportation model does, as the commenter noted, include the effects of new and improved rail travel and, thus some of the TCMs are included in the transportation network model. However, because the transportation network model is not used for the ROP estimates, the TCM emission reduction credits are not included in the ROP calculations and it is appropriate to deduct the TCM reduction credits as Illinois has done in the ROP plan.

#### *Comment 41*

A commenter asserts that, although the ethanol industry claims that the oxygen in ethanol helps reduce emissions from older vehicles and off-road engines, the data are ambiguous regarding this benefit. The commenter opposes the 0.3 pounds per square inch (psi) vapor pressure waiver for reformulated gasoline (RFG) containing ethanol and believes that this waiver is not based on sound science.

#### *Response 41*

Overall, we continue to believe that the 2.0 percentage point adjustment to the VOC performance standard is appropriate for RFG with 10 volume percent ethanol sold in the Chicago-Gary-Lake County and Milwaukee-Racine ozone nonattainment areas. Because ethanol RFG constitutes virtually 100 percent of the RFG market in these areas, they are significantly different from other RFG areas. Accordingly, we are confident that, in the Chicago and Milwaukee areas, the adjusted VOC rule will not adversely impact air quality.

Regardless of whether the vapor pressure waiver for ethanol-based fuel is

based on sound science, this comment is moot with regard to the issue at hand, the approvability of Illinois' ozone attainment demonstration. It is noted that the State followed EPA guidance in establishing VOC emissions for this fuel type. Mobile source emissions, including fuel evaporative emissions were derived by the IEPA using EPA-supplied guidance and the MOBILE 5 emissions factor model. The State used this model with the reformulated gasoline flags set to true, thus acknowledging the use of ethanol gasoline blends. It is true that the MOBILE 5 model fails to estimate the extra VOC emissions resulting from the use of ethanol-based fuels. It also true, however, that the model also fails to account for the decreased carbon monoxide emissions resulting from the use of these fuel blends. Decreased carbon monoxide emissions lead to lower peak ozone concentrations downwind. Therefore, compensating errors have occurred in the modeling results, nullifying each other's effects on predicted ozone concentrations. Whether the scientific basis for the vapor pressure waiver is good or bad has no or little bearing on the validity of the ozone attainment demonstration.

#### *Comment 42*

We received a number of comments about the process and substance of EPA's review of the adequacy of motor vehicle emissions budgets for transportation conformity purposes.

#### *Response 42*

We have completed our review of the adequacy of these SIPs, and we have found the motor vehicle emissions budgets in all of these SIPs to be adequate. We responded to all comments related to adequacy when we issued our adequacy findings, and therefore we are not listing the individual comments or responding to them here. You may access our findings of adequacy and responses to comments at [www.epa.gov/otaq/traq](http://www.epa.gov/otaq/traq) (once there, click on the "conformity" button). EPA regional contacts are identified on the web site.

#### *Comment 43*

One commentator generally supports a policy of requiring motor vehicle emissions budgets to be recalculated when revised MOBILE models are released.

#### *Response 43*

The Phase II attainment demonstrations that rely on Tier 2 emission reduction credit contain commitments to revise the motor

vehicle emissions budgets after MOBILE6 is released. As noted elsewhere in this final rule, Illinois has committed to revising the motor vehicle emission budgets within two years after EPA releases the MOBILE6 emission factor model.

#### *Comment 44*

The revised budgets calculated using MOBILE6 will likely be submitted after EPA has approved the MOBILE5 budgets. EPA's policy is that submitted SIPs may not replace approved SIPs.

#### *Response 44*

This is the reason that EPA proposed in the July 28, 2000, Supplemental Notice of Proposed Rulemaking (65 FR 46383) that the approval of the MOBILE5 budgets for conformity purposes would last only until MOBILE6 budgets had been submitted and found adequate. In this way, the MOBILE6 budgets can apply for conformity purposes as soon as they are found adequate.

#### *Comment 45*

If a state submits additional control measures that affect the motor vehicle emissions budget, but does not submit a revised motor vehicle emissions budget, EPA should not approve the attainment demonstration.

#### *Response 45*

EPA agrees. The motor vehicle emissions budgets in the Chicago nonattainment area attainment demonstration reflect the motor vehicle control measures in the attainment demonstration.

#### *Comment 46*

A commenter states that EPA should make it clear that the motor vehicle emissions budgets used for conformity purposes will be determined from the total motor vehicle emissions reductions required in the SIP, even if the SIP does not explicitly quantify a revised motor vehicle emissions budget.

#### *Response 46*

EPA will not approve SIPs without motor vehicle emissions budgets that are explicitly quantified for conformity purposes. The Chicago area attainment demonstration contains explicitly quantified motor vehicle emissions budgets.

#### *Comment 47*

If a state fails to follow through on its commitment to submit the revised motor vehicle emissions budgets using MOBILE6, EPA could find a failure to submit a portion of a SIP, which would

trigger a sanctions clock under section 179.

#### *Response 47*

If a state fails to meet its commitment, EPA could find a failure to implement the SIP, which would start a sanctions clock under section 179 of the Act.

#### *Comment 48*

If the budgets recalculated using MOBILE6 are larger than the MOBILE5 budgets, then attainment should be demonstrated again.

#### *Response 48*

As EPA proposed in its December 16, 1999 notices, we will work with states on a case-by-case basis if the new emissions estimates raise issues about the sufficiency of the attainment demonstration.

#### *Comment 49*

If the MOBILE6 emission budgets are smaller than the MOBILE5 emission budgets, the difference between the budgets should not be available for reallocation to other sources, unless air quality data show that the area is in attainment of the standard and a revised attainment demonstration is submitted that demonstrates that the increased emissions are consistent with attainment and maintenance. Similarly, the MOBILE5 budgets should not be retained (when MOBILE6 is used for conformity demonstrations) unless the above conditions are met.

#### *Response 49*

EPA agrees that if recalculation using MOBILE6 shows lower motor vehicle emissions than MOBILE5, then these motor vehicle emission reductions cannot be reallocated to other sources or assigned to the motor vehicle emissions budget as a safety margin unless the area reassesses the analysis in its attainment demonstration and shows that it will still attain. In other words, the area must assess how its original attainment demonstration is impacted by using MOBILE6 versus MOBILE5 before it reallocates any apparent motor vehicle emission reductions resulting from the use of MOBILE6. Since Illinois has committed to submit MOBILE6 budgets within two years of the model's release and EPA's approval of the MOBILE5 budgets is limited, the MOBILE5 budgets will not be retained once the MOBILE6 budgets have been found adequate.

#### *Comment 50*

We received a comment on whether the grace period before MOBILE6 is required in conformity determinations

will be consistent with the schedules for revising SIP motor vehicle emissions budgets ("budgets") within one or two years of MOBILE6's release.

*Response 50*

This comment is not germane to this rulemaking, since the MOBILE6 grace period for conformity determinations is not explicitly tied to EPA's SIP policy and approvals. However, EPA understands that a longer grace period would allow some areas to better transition to new MOBILE6 budgets. EPA is considering the maximum two year grace period allowed by the conformity rule, and EPA will address this in the future when we release the final MOBILE6 emissions model and policy guidance.

*Comment 51*

One commenter asked EPA to clarify in the final rule whether MOBILE6 will be required for conformity determinations once new MOBILE6 budgets are submitted and found adequate.

*Response 51*

This comment is not germane to this rulemaking. However, it is important to note that EPA intends to clarify its policy for implementing MOBILE6 in conformity determinations when we release the final MOBILE6 model. EPA believes that MOBILE6 should be used in conformity determinations once new MOBILE6 budgets are found adequate.

*Comment 52*

One commenter did not prefer the additional option for a second year before the state has to revise the conformity budgets with MOBILE6, since new conformity determinations and new transportation projects could be delayed in the second year.

*Response 52*

EPA proposed the additional option to provide further flexibility in managing MOBILE6 budget revisions. The supplemental proposal did not change the original option to revise budgets within one year of MOBILE6's release. State and local governments may continue to use the one-year option, if desired, or submit a new commitment consistent with the alternative two-year option. EPA expects state and local agencies to consult on which option is appropriate, and consider the impact on future conformity determinations. Illinois has committed to revise its budgets within two years of MOBILE6's release.

## VII. Final EPA Action

Consideration of the public comments on the December 16, 1999 and July 11, 2001 leads us to the conclusion that there are insufficient bases to reverse our proposed actions in the July 11, 2001 proposed rule. Therefore, we are taking the final actions as discussed below.

### A. Ozone Attainment Demonstration

EPA is approving Illinois' ozone attainment demonstration SIP revision for the Chicago-Gary-Lake County ozone nonattainment area, which was submitted on December 26, 2000.

### B. Post-1999 ROP Plan

EPA is approving Illinois' post-1999 ROP SIP revision for the Illinois portion of the Chicago-Gary-Lake County ozone nonattainment area as submitted by the State on December 26, 2000.

### C. Contingency Measure Plan

EPA is approving Illinois' contingency measure plan for the ozone attainment demonstration and post-1999 ROP plan as submitted by the State on December 26, 2000.

### D. Commitment to Conduct a Mid-Course Review

EPA is approving Illinois' commitment to conduct a mid-course review of the ozone attainment demonstration for the Chicago-Gary-Lake County ozone nonattainment area by the end of 2004.

### E. Motor Vehicle Emission Budgets for VOC and NO<sub>x</sub>

EPA is approving Illinois' motor vehicle VOC and NO<sub>x</sub> emissions budgets for 2002, 2005, and 2007. EPA is also approving the State's commitments to revise the motor vehicle emission budgets within two years after EPA releases the MOBILE6 emission factor model.

### F. RACM Analysis

EPA approves the Illinois SIP as demonstrating that the State has implemented RACM in the Chicago nonattainment area.

### G. NO<sub>x</sub> Emissions Control Waiver

EPA is revising the existing NO<sub>x</sub> waiver for the Illinois portion of the Chicago-Gary-Lake County ozone nonattainment area to remove from the waiver NO<sub>x</sub> emission controls for major EGUs, major non-EGU boilers and turbines, and major cement kilns as adopted by the State to comply with EPA's NO<sub>x</sub> SIP Call and to achieve attainment of the ozone standard in this ozone nonattainment area. EPA is

leaving the NO<sub>x</sub> waiver in place in this ozone nonattainment area for NO<sub>x</sub> emission controls due to the implementation of RACT, NSR, and certain requirements of I/M and transportation and general conformity. EPA is denying a related citizen petition for the termination of the NSR portion of the NO<sub>x</sub> waiver.

## VIII. Administrative Requirements

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a "significant regulatory action" and, therefore, is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001). This action merely approves state law as meeting federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4). This rule also does not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it merely approves a state rule implementing a federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This rule also is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because it is not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. In this context, in the absence

of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. As required by section 3 of Executive Order 12988 (61 FR 4729, February 7, 1996), in issuing this rule, EPA has taken the necessary steps to eliminate drafting errors and ambiguity, minimize potential litigation, and provide a clear legal standard for affected conduct. EPA has complied with Executive Order 12630 (53 FR 8859, March 15, 1988) by examining the takings implications of the rule in accordance with the "Attorney General's Supplemental Guidelines for the Evaluation of Risk and Avoidance of Unanticipated Takings" issued under the executive order. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

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. 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 not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective December 13, 2001.

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by January 14, 2002. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to

enforce its requirements. (See section 307(b)(2).)

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen Oxides, Ozone, Volatile Organic Compounds.

Dated: October 15, 2001.

**David A. Ullrich,**

*Deputy Regional Administrator, Region 5.*

For the reasons stated in the preamble, part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

#### PART 52—[AMENDED]

1. The authority citation of part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

#### Subpart O—Illinois

2. Section 52.726 is amended by adding paragraph (dd) to read as follows:

#### § 52.726 Control Strategy: Ozone

\* \* \* \* \*

(dd) Chicago Ozone Attainment Demonstration Approval—On December 26, 2000, Illinois submitted a one-hour ozone attainment demonstration plan as a requested revision to the Illinois State Implementation Plan. This plan includes: A modeled demonstration of attainment and associated attainment year conformity emission budgets; a plan to reduce ozone precursor emissions by 3 percent per year from 2000 to 2007 (a post-1999 rate-of-progress plan), and associated conformity emission budgets; a contingency measures plan for both the ozone attainment demonstration and the post-1999 rate-of-progress plan; a commitment to conduct a Mid-Course Review of the ozone attainment demonstration by the end of 2004; a demonstration that Illinois has implemented all reasonably available control measures; and a commitment to revise motor vehicle emission budgets within two years after the U.S. Environmental Protection Agency officially releases the MOBILE6 emission factor model.

[FR Doc. 01-27720 Filed 11-9-01; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[W1108-7338; FRL-7094-3]

### Approval and Promulgation of Air Quality Plans; Wisconsin; Ozone

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The EPA is approving the revisions submitted by the Wisconsin Department of Natural Resources (WDNR or state) to its State Implementation Plan (SIP) for the Milwaukee-Racine area for attainment of the one-hour ozone standard and is approving the SIP as fully meeting the attainment demonstration requirement of the Clean Air Act (Act). The revision was submitted to EPA on December 27, 2000. EPA is approving the air quality modeling, rules to reduce emissions of ozone forming pollutants (i.e., nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC)), a plan demonstrating how progress in emission reductions will be achieved through the area's attainment date of 2007 (i.e., Rate of Progress Plan (ROP)), a reasonably available control measure (RACM) analysis, NO<sub>x</sub> waiver revisions, transportation conformity budgets, and commitments to complete a mid-course review and to recalculate the attainment year budget using MOBILE6. On July 2, 2001, we proposed approval of these SIP revision elements and the SIP as a whole as meeting the attainment demonstration requirement of the Act.

**DATES:** This final rule is effective December 13, 2001.

**ADDRESSES:** You can access copies of the SIP revision request and the Technical Support Document (TSD) for the proposed rulemaking on the SIP revision request at the following address: U.S. Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. (We recommend that you telephone Randy Robinson at (312) 353-6713 before visiting the Region 5 Office).

**FOR FURTHER INFORMATION CONTACT:** Randy Robinson, Regulation Development Section 2, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, Telephone number (312) 353-6713, robinson.randall@epa.gov.

**SUPPLEMENTARY INFORMATION:** Throughout this document, wherever