VI. Proposed Action

Pursuant to sections 179 and 181(b)(2)(A) of the CAA, EPA is proposing to determine that the Washington Area has attained the 1997 8-hour ozone NAAQS by its moderate area attainment date, June 15, 2010. If EPA finalizes this determination, the requirements to submit an attainment demonstration and associated RACM, RFP plan, contingency measures, and any other planning requirements related to attainment of the 1997 8-hour ozone NAAQS will be suspended, as provided in 40 CFR section 51.918, so long as the area continues to attain the 1997 8-hour ozone NAAQS. EPA is soliciting public comments on the issues discussed in this document. These comments will be considered before taking final action.

VII. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA’s role is to approve state choices, provided that they meet the criteria of the Clean Air Act.

Accordingly, this action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, these proposed determinations of attainment of the 1997 8-hour ozone NAAQS for the Washington Area do not have Tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because this proposed action is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on Tribal governments or preempt Tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements.

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

Dated: August 31, 2011.

W.C. Early,
Garvin, Regional Administrator, Region III.

[FR Doc. 2011–24098 Filed 9–19–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81


Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; North Carolina: Redesignation of the Hickory-Morganton-Lenoir 1997 Annual Fine Particulate Matter Nonattainment Area to Attainment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve SIP revisions submitted on December 18, 2009, and December 22, 2010 (supplemental submission) by the State of North Carolina, through the North Carolina Department of Environment and Natural Resources (NC DENR), Division of Air Quality (DAQ), to support North Carolina’s request to redesignate the Hickory-Morganton-Lenoir fine particulate matter (PM2.5) nonattainment area (hereafter the “Hickory Area” or “Area”) to attainment for the 1997 Annual PM2.5 National Ambient Air Quality Standards (NAAQS). The Hickory Area is comprised of Catawba County in its entirety. EPA is now proposing four separate but related actions. First, EPA is proposing to approve the December 18, 2009, PM2.5 redesignation request, including the December 22, 2010, Motor Vehicle Emission Simulator (MOVES) mobile model supplement for the Hickory Area, provided that EPA takes final action to approve specific provisions of the North Carolina Clean Smokestacks Act (NCCSA). Second, EPA is proposing to approve North Carolina’s 2008 emissions inventory for the Hickory Area under section 172(c)(3) of the Clean Air Act (CAA or Act). Third, subject to the same proviso regarding the NCCSA and final approval of the 2008 emissions inventory, EPA is proposing to approve the 1997 Annual PM2.5 NAAQS maintenance plan for the Hickory Area, including the 2008 baseline emissions inventory, and the motor vehicle emission budgets (MVEBs) for nitrogen oxides (NOx) for the years 2011 and 2021, and the mobile insignificance determination for direct PM2.5 for the Hickory Area. EPA is also describing the status of its transportation conformity adequacy determination for the new 2011 and 2021 MVEBs for NOx that are contained in the 1997 Annual PM2.5 NAAQS maintenance plan for the Hickory Area. Fourth and separate from the action to redesignate the Hickory Area, EPA is proposing to determine that the Area has attained the 1997 annual PM2.5 NAAQS by its applicable attainment date of April 5, 2010. These proposed actions are being taken pursuant to the CAA and its implementing regulations.

DATES: Comments must be received on or before October 20, 2011.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R04–OAR–2009–1010, by one of the following methods:


2. E-mail: benjamin.lynorae@epa.gov.

3. Fax: (404) 562–9019.

I. What are the actions EPA is proposing to take?
II. What is the background for EPA's proposed actions?
III. What are the criteria for redesignation?
IV. Why is EPA proposing these actions?
V. What is the effect of EPA's proposed actions?
VI. What is the background for EPA's proposed actions?
VII. What is EPA's analysis of the request?
VIII. What is the status of EPA's adequacy determination for the Hickory Area?
IX. What is EPA's analysis of the proposed 2008 base year emissions inventory for the Hickory area?
X. Proposed Actions on the Redesignation Request and Maintenance Plan SIP Revision Including Proposed Approval of the 2011 and 2021 NO₂ MVEBs and for the Insignificance Determination for the Hickory Area
XI. Proposed Action on the Determination that the Hickory Area Has Attained the 1997 PM_{2.5} NAAQS by its Applicable Attainment Date
XII. Statutory and Executive Order Reviews

EPA is proposing to take the following four separate but related actions, some of which involve multiple elements: (1) to determine that the Hickory Area Has Attained the 1997 PM_{2.5} NAAQS by its Applicable Attainment Date; (2) to determine that the Hickory Area has attained the 1997 PM_{2.5} NAAQS by its attainment date of April 5, 2010; (3) to determine that the Hickory Area is continuing to attain the 1997 PM_{2.5} NAAQS and to take several additional related actions regarding the Area, which are summarized below and described in greater detail throughout this notice of proposed rulemaking.

First, EPA proposes to determine that, if EPA's proposed approvals of the 2008 baseline emissions inventory for the Hickory Area and the NCCSA Federal rulemaking action are finalized, the Area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. In this action, EPA is proposing to approve a request to change the legal designation of Catawba County in the Hickory Area from nonattainment to attainment for the 1997 Annual PM_{2.5} NAAQS. The emissions inventory is being proposed for approval today, and the NCCSA rules were proposed for approval in a separate action on June 22, 2011 (76 FR 36468).

Second, EPA is proposing to approve Carolina's 2008 emissions inventory for the Hickory Area (under CAA section 172(c)(3)). North Carolina selected 2008 as the attainment emissions inventory year for the Hickory Area. This attainment inventory identifies a level of emissions in the Area that is sufficient to attain the 1997 Annual PM_{2.5} NAAQS and is a current, comprehensive inventory that meets the requirements of section 172(c)(3).

Third, subject to EPA's final approval of the NCCSA into the SIP, EPA is proposing to approve North Carolina's 1997 Annual PM_{2.5} NAAQS maintenance plan for the Hickory Area as meeting the requirements of CAA section 175A (such approval being one of the CAA criteria for redesignation to attainment status). The maintenance plan is designed to help keep the

I. What are the actions EPA is proposing to take?

EPA is proposing to take the following four separate but related actions, some of which involve multiple elements: (1) to determine that the Hickory Area Has Attained the 1997 PM_{2.5} NAAQS, provided EPA approves the emissions inventory submitted with the maintenance plan as well as the NCCSA, which is the subject of separate Federal rulemaking action; (2) to approve, under section 172(c)(3) of the CAA, the emissions inventory submitted with the maintenance plan; (3) to approve into the North Carolina SIP, under section 175A of the CAA, Hickory's 1997 Annual PM_{2.5} NAAQS maintenance plan, including the associated MVEBs (EPA is also notifying the public of the status of EPA's adequacy determination for the Hickory Area MVEBs); and (4) to determine, pursuant to section 179(c) of the CAA, that the Hickory Area attained the 1997 PM_{2.5} NAAQS by its attainment date of April 5, 2010.

On January 5, 2010, at 75 FR 230, EPA determined that the Hickory Area was attaining the 1997 PM_{2.5} NAAQS. EPA is now proposing to determine that the Area is continuing to attain the 1997 PM_{2.5} NAAQS and to take several additional related actions regarding the Area, which are summarized below and described in greater detail throughout this notice of proposed rulemaking.

First, EPA proposes to determine that, if EPA's proposed approvals of the 2008 baseline emissions inventory for the Hickory Area and the NCCSA Federal rulemaking action are finalized, the Area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. In this action, EPA is proposing to approve a request to change the legal designation of Catawba County in the Hickory Area from nonattainment to attainment for the 1997 Annual PM_{2.5} NAAQS. The emissions inventory is being proposed for approval today, and the NCCSA rules were proposed for approval in a separate action on June 22, 2011 (76 FR 36468).

Second, EPA is proposing to approve North Carolina's 2008 emissions inventory for the Hickory Area (under CAA section 172(c)(3)). North Carolina selected 2008 as the attainment emissions inventory year for the Hickory Area. This attainment inventory identifies a level of emissions in the Area that is sufficient to attain the 1997 Annual PM_{2.5} NAAQS and is a current, comprehensive inventory that meets the requirements of section 172(c)(3).

Third, subject to EPA's final approval of the NCCSA into the SIP, EPA is proposing to approve North Carolina's 1997 Annual PM_{2.5} NAAQS maintenance plan for the Hickory Area as meeting the requirements of CAA section 175A (such approval being one of the CAA criteria for redesignation to attainment status). The maintenance plan is designed to help keep the
Hickory Area in attainment of the 1997 Annual PM<sub>2.5</sub> NAAQS through 2021. Consistent with the CAA, the maintenance plan that EPA is proposing to approve today also includes NOx MVEBs for the years 2011 and 2021 and an insignificance determination for the mobile source contribution of direct PM<sub>2.5</sub> to the air quality problem in the Hickory Area. EPA is proposing to approve into the North Carolina SIP the 2011 and 2021 MVEBs that are included as part of North Carolina’s maintenance plan for the 1997 Annual PM<sub>2.5</sub> NAAQS and the insignificance determination for the mobile source contribution of direct PM<sub>2.5</sub> emissions in the Area.

On a related matter to this third action, EPA is also notifying the public of the status of EPA’s adequacy process (Adequacy) for the newly-established NOx MVEBs for 2011 and 2021 for the Hickory Area and the mobile source insignificance determination for direct PM<sub>2.5</sub> emissions. The Adequacy comment period for the Hickory Area 2011 and 2021 MVEBs began on November 23, 2010, with EPA’s posting of the availability of this submittal on EPA’s Adequacy Web site (http://www.epa.gov/otaq/stateresources/transconf/cursips.htm). The Adequacy comment period for these MVEBs and the insignificance determination for direct PM<sub>2.5</sub> emission contribution from motor vehicles closed on December 23, 2010, and EPA received no adverse comments. Please see section VIII of this proposed rulemaking for further explanation of this process and more details on the MVEBs and the insignificance determination for the mobile source contribution.

Fourth and separate from the action to redesignate the Area, EPA is proposing to determine, based on quality-assured and certified monitoring data for the 2007–2009 monitoring period, that the Hickory Area has attained the 1997 annual PM<sub>2.5</sub> NAAQS by its applicable attainment date of April 5, 2010.

Today’s notice of proposed rulemaking is in response to North Carolina’s December 18, 2009, SIP submittal and subsequent supplement of December 21, 2010. Those documents address the specific issues summarized above and the necessary elements described in section 107(d)(3)(E) of the CAA for redesignation of the Hickory Area to attainment for the 1997 Annual PM<sub>2.5</sub> NAAQS. If redesignation is not granted, EPA will reassess the status of the Hickory area in the next 3-year period.

II. What is the background for EPA’s proposed actions?

Fine particle pollution can be emitted directly or formed secondarily in the atmosphere. The major precursors of PM<sub>2.5</sub> are sulfur dioxide (SO<sub>2</sub>), NOx, ammonia and volatile organic compounds (VOCs). Unless otherwise noted by the State or EPA, ammonia and VOCs are presumed to be insignificant contributors to PM<sub>2.5</sub> formation, whereas SO<sub>2</sub> and NO<sub>x</sub> are presumed to be significant contributors to PM<sub>2.5</sub> formation. Sulfates are a type of secondary particle formed from SO<sub>2</sub> emissions of power plants and industrial facilities. Nitrates, another common type of secondary particle, are formed from NOx emissions of power plants, automobiles, and other combustion sources.

On July 18, 1997, EPA promulgated the first air quality standards for PM<sub>2.5</sub>. EPA promulgated an annual standard at a level of 15 micrograms per cubic meter (μg/m³), based on a three-year average of annual mean PM<sub>2.5</sub> concentrations. In the same rulemaking, EPA promulgated a 24-hour standard of 65 μg/m³, based on a three-year average of the 98th percentile of 24-hour concentrations. On October 17, 2006, at 71 FR 61144, EPA retained the annual average NAAQS at 15 μg/m³ but revised the 24-hour NAAQS, based again on the three-year average of the 98th percentile of 24-hour concentrations. Under EPA regulations at 40 CFR part 50, the primary and secondary 1997 Annual PM<sub>2.5</sub> NAAQS are attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, Appendix N, is less than or equal to 15.0 μg/m³ at all relevant monitoring sites in the subject area over a 3-year period.

On January 5, 2005, at 70 FR 944, and as supplemented on April 14, 2005, at 70 FR 19844, EPA designated the Hickory Area as nonattainment for the 1997 Annual PM<sub>2.5</sub> NAAQS. In that action, EPA defined the 1997 PM<sub>2.5</sub> Hickory Area to include Catawba County in its entirety. On November 13, 2009, at 74 FR 58688, EPA promulgated designations for the 24-hour standard established in 2006, designating the Hickory Area as attaining this NAAQS. That action clarified that the Hickory Area was also attaining the 24-hour NAAQS promulgated in 1997. EPA did not promulgate designations for the annual average NAAQS promulgated in 2006 since the NAAQS was essentially identical to the annual PM<sub>2.5</sub> NAAQS promulgated in 1997. Therefore, the Hickory Area is designated nonattainment only for the annual NAAQS promulgated in 1997, and today’s action only addresses this designation.

All 1997 PM<sub>2.5</sub> NAAQS areas were designated under subpart 1 of title I, part D, of the CAA. Subpart D contains the general requirements for nonattainment areas for any pollutant governed by a NAAQS and is less prescriptive than the other subparts of title I, part D. On April 25, 2007, at 72 FR 20664, EPA promulgated its PM<sub>2.5</sub> Implementation Rule, codified at 40 CFR part 51, subpart Z, in which the Agency provided guidance for state and tribal plans to implement the 1997 PM<sub>2.5</sub> NAAQS. This rule, at 40 CFR 51.1004(c), specifies some of the regulatory consequences of attaining the NAAQS, as discussed below.

On May 12, 2005, EPA published the Clean Air Interstate Rule (CAIR), which addressed the interstate transport requirements of the CAA and required states to significantly reduce SO<sub>2</sub> and NOx emissions from power plants (70 FR 25162). The associated Federal Implementation Plans (FIPs) were published on April 28, 2006 (71 FR 25328). However, on July 11, 2008, the D.C. Circuit Court issued its decision to vacate and remand both CAIR and the associated CAIR FIPs in their entirety (North Carolina v. EPA, 531 F.3d 836 (D.C. Cir., 2008)). EPA petitioned for rehearing, and the Court issued an order remanding CAIR to EPA without vacating either CAIR or the CAIR FIPs (North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir., 2008)). The Court left CAIR in place to “temporarily preserve the environmental values covered by CAIR” until EPA replaces it with a rule consistent with the Court’s opinion (id. at 1178). The Court directed EPA to “remedy CAIR’s flaws” consistent with its July 11, 2008, opinion but declined to impose a schedule on EPA for completing that action (id). As a result of these court rulings, the power plant emission reductions that resulted solely from the development, promulgation, and implementation of CAIR, and the associated contribution to air quality improvement that occurred solely as a result of CAIR in the Hickory Area could not be considered to be permanent.

On August 8, 2011, EPA published the Cross State Air Pollution Rule (CSAPR) in the Federal Register under the title, “Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone in 27 States; Correction of SIP Approvals for 22 States (hereafter the “Cross-State Air Pollution Rule”) (CSAPR)” (76 FR
To address interstate transport of emissions and resulting secondary air pollutants and to replace CAIR. The CAIR emission reduction requirements limit emissions in North Carolina and states upwind of North Carolina through 2011 and the CSAPR requires similar or greater reductions in the relevant areas in 2012 and beyond. The emission reductions that the CSAPR mandates may be considered to be permanent and enforceable. In turn, the air quality improvement in the Hickory Area that has resulted from the emission reduction requirements of the CSAPR may also be considered to be permanent and enforceable. EPA proposes that the requirement of section 107(d)(3)(E)(iii) has been met because the emission reduction requirements of CAIR address emissions through 2011 and EPA has now promulgated CSAPR which requires similar or greater reductions in the relevant areas in 2012 and beyond. Because the emission reduction requirements of CAIR are enforceable through the 2011 control period, and because CSAPR has now been promulgated to address the requirements previously addressed by CAIR and gets similar or greater reductions in the relevant areas in 2012 and beyond, EPA is proposing to determine that the emission reductions that led to attainment in the Hickory nonattainment area can now be considered permanent and enforceable. Therefore, EPA proposes to find that the transport requirement of the CAA has been met for the Hickory Area.

The 3-year ambient air quality data for 2006–2008 indicated no violations of the 1997 Annual PM\textsubscript{2.5} NAAQS for the Hickory Area. As a result, on December 18, 2009, and as supplemented on December 22, 2010, North Carolina requested redesignation of the Hickory Area to attainment for the 1997 Annual PM\textsubscript{2.5} NAAQS. The redesignation request included three years of complete, quality-assured ambient air quality data for the 1997 Annual PM\textsubscript{2.5} NAAQS for 2006–2008, indicating that the 1997 Annual PM\textsubscript{2.5} NAAQS had been achieved for the Hickory Area. Under the CAA, nonattainment areas may be redesignated to attainment if sufficient, complete, quality-assured data is available for the Administrator to determine that the area has attained the standard and the area meets the other CAA redesignation requirements in section 107(d)(3)(E). From 2005 through the present, the monitored annual average PM\textsubscript{2.5} values for the Hickory Area have declined such that the area has attained the 1997 Annual PM\textsubscript{2.5} NAAQS. On January 5, 2010, EPA determined that the Hickory Area had attained the 1997 Annual PM\textsubscript{2.5} NAAQS (75 FR 230). While annual PM\textsubscript{2.5} concentrations are dependent on a variety of conditions, the overall downtrend in annual PM\textsubscript{2.5} concentrations in the Hickory Area can be attributed to the reduction of SO\textsubscript{2} emissions, as will be discussed in more detail in section VI of this proposed rulemaking. EPA is now proposing to find that the Hickory Area continues to attain the 1997 PM\textsubscript{2.5} NAAQS.

## III. What are the criteria for redesignation?

The CAA provides the requirements for redesignating a nonattainment area to attainment. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation provided the following criteria are met: (1) The Administrator determines that the area has attained the applicable NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k); (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP and applicable Federal air pollutant control regulations; (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 175A; and (5) the state containing such area has met all requirements applicable to the area under section 110 and part D of title I of the CAA.

EPA has provided guidance on redesignation in the General Preamble for the Implementation of title I of the CAA Amendments of 1990 (April 16, 1992, 57 FR 13498, and supplemented on April 28, 1992, 57 FR 18070) and has provided further guidance on processing redesignation requests in the following documents:

1. “Procedures for Processing Requests to Redeem AERs to Attainment,” Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (hereafter referred to as the “Calcagni Memorandum”);

2. “State Implementation Plan (SIP) Actions Submitted in Response to Clean Air Act (CAA) Deadlines,” Memorandum from John Calcagni, Director, Air Quality Management Division, October 28, 1992; and


## IV. Why is EPA proposing these actions?

On December 18, 2009, and as supplemented on December 22, 2010, the State of North Carolina, through DAQ, requested redesignation of the Hickory Area to attainment for the 1997 Annual PM\textsubscript{2.5} NAAQS. EPA’s evaluation indicates that the Hickory Area has attained the 1997 Annual PM\textsubscript{2.5} NAAQS. If EPA finalizes approval of the emissions inventory and the NCCSA rulemaking, the Area will meet the requirements for redesignation set forth in section 107(d)(3)(E), including the maintenance plan requirements under section 175A. As a result, EPA is proposing to take the first three related actions previously summarized.

The fourth action, to determine that the Area has attained the 1997 Annual PM\textsubscript{2.5} NAAQS by its attainment date, is being proposed in accordance with section 179(c)(1) of the CAA based upon EPA’s review of the data for 2007–2009. Section 179(c)(1) reads as follows: “As expeditiously as practicable after the applicable attainment date for any nonattainment area, but not later than 6 months after such date, the Administrator shall determine, based on the area’s air quality as of the attainment date, whether the area attained the standard by that date.” EPA proposes to determine that the Area attained the 1997 Annual PM\textsubscript{2.5} NAAQS by its applicable attainment date of April 5, 2010.

## V. What is the effect of EPA’s proposed actions?

EPA’s proposed actions establish the basis upon which EPA may take final action on the North Carolina submittal being proposed for approval today. Approval of North Carolina’s redesignation request would change the legal designation of Catawba County in North Carolina for the 1997 Annual PM\textsubscript{2.5} NAAQS, found at 40 CFR part 81, from nonattainment to attainment. Approval of North Carolina’s request would also incorporate into the North Carolina SIP a plan for maintaining the 1997 Annual PM\textsubscript{2.5} NAAQS in the Hickory Area through 2021. The maintenance plan includes, among other components, contingency measures to remedy potential future violations of the 1997 Annual PM\textsubscript{2.5}
NAAQS. Approval of North Carolina’s maintenance plan would also result in approval of the NOx MVEBs and the direct PM$_{2.5}$ mobile source insignificance determination. The maintenance plan also establishes NOx MVEBs for 2011 and 2021 for the Hickory Area of 3,996,601 kilograms per year (kg/yr) and 2,236,028 kg/yr, respectively. Final action would also approve the Area’s emissions inventory under section 172(c)(3). Additionally, EPA is notifying the public of the status of its adequacy determination for the NOx MVEBs for 2011 and 2021 and the direct PM$_{2.5}$ mobile source insignificance determination pursuant to 40 CFR 93.118(f)(1).

VI. What is EPA’s analysis of the request?

As stated above, in accordance with the CAA, EPA proposes in today’s action to: (1) Redesignate the Hickory Area to attainment for the 1997 Annual PM$_{2.5}$ NAAQS; (2) approve the Hickory Area emissions inventory submitted with the maintenance plan; (3) approve the North Carolina SIP Hickory’s 1997 Annual PM$_{2.5}$ NAAQS maintenance plan, including the associated MVEBs; and (4) determine that the Hickory Area attained the 1997 PM$_{2.5}$ NAAQS by its attainment date of April 5, 2010. The first three of these actions are based upon EPA’s determination that the Hickory Area continues to attain the 1997 Annual PM$_{2.5}$ NAAQS and that all other redesignation criteria have been met for the Hickory Area, provided EPA approves the emissions inventory submitted with the maintenance plan and the NCCSA rulemaking. The five redesignation criteria provided under CAA section 107(d)(3)(E) are discussed in greater detail for the Area in the following paragraphs of this section. The fourth action, EPA’s determination that the Hickory Area attained the 1997 PM$_{2.5}$ NAAQS by its attainment date of April 5, 2010, is discussed in section XI.

Criteria (1)—The Hickory Area Has Attained the 1997 Annual PM$_{2.5}$ NAAQS

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS (CAA section 107(d)(3)(E)(i)). EPA is proposing to determine that the Hickory Area continues to attain the 1997 Annual PM$_{2.5}$ NAAQS. For PM$_{2.5}$, an area may be considered to be attaining the 1997 Annual PM$_{2.5}$ NAAQS if it meets the 1997 Annual PM$_{2.5}$ NAAQS, as determined in accordance with 40 CFR 50.7 and Appendix N of part 50, based on three complete, consecutive calendar years of quality-assured air quality monitoring data. To attain these NAAQS, the 3-year average of the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, Appendix N, is less than or equal to 15.0 μg/m$^3$ at all relevant monitoring sites in the subject area over a 3-year period. The relevant data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in the EPA Air Quality System (AQS). The monitors generally should have remained at the same location for the duration of the monitoring period required for demonstrating attainment.

On January 5, 2010, at 75 FR 230, EPA determined that the Hickory Area was attaining the 1997 PM$_{2.5}$ NAAQS. EPA reviewed PM$_{2.5}$ monitoring data from monitoring sites in the Hickory Area for the 1997 Annual PM$_{2.5}$ NAAQS for the 2006–2008 and the 2007–2009 periods. These data have been quality-assured and are recorded in AQS. The annual arithmetic mean PM$_{2.5}$ concentrations for the 2006–2008 and the 2007–2009 periods, and the 3-year averages of these values (i.e., design values) are summarized in Table 1. EPA has reviewed more recent data which indicate that the Hickory Area continues to attain the 1997 PM$_{2.5}$ NAAQS. The design values for 2007–2009 and 2008–2010 are also included in Table 1 and demonstrate that the Hickory Area continues to meet the PM$_{2.5}$ NAAQS and that the ambient concentrations of PM$_{2.5}$ are continuing to decrease in the Area.

<table>
<thead>
<tr>
<th>County</th>
<th>Site name</th>
<th>Monitor ID</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catawba</td>
<td>Hickory</td>
<td>37–035–0004</td>
<td>15.18</td>
<td>14.62</td>
<td>12.75</td>
<td>10.32</td>
<td>11.23</td>
</tr>
</tbody>
</table>

Three-year PM$_{2.5}$ design values (μg/m$^3$)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Catawba</td>
<td>Hickory</td>
<td>37–035–0004</td>
<td>14.2</td>
</tr>
</tbody>
</table>

The 3-year design value (2006–2008) submitted by North Carolina for redesignation of the Hickory Area is 14.2 μg/m$^3$, which meets the NAAQS as described above. Preliminary 2010 air quality data that are available in AQS, but not yet certified, indicate that the Area continues to attain the PM$_{2.5}$ NAAQS. As mentioned above, on January 5, 2010 (75 FR 230) EPA published a clean data determination for the Hickory Area for the 1997 PM$_{2.5}$ NAAQS. In today’s action, EPA is proposing to determine that the Area is continuing to attain the 1997 PM$_{2.5}$ NAAQS. EPA will not go forward with the redesignation if the Area does not continue to attain until the time that EPA finalizes the redesignation. As discussed in more detail below, the State of North Carolina has committed to continue monitoring in the Area in accordance with 40 CFR part 58.

2 The values in Table 1 represent the most current quality assured, quality controlled and certified ambient air monitoring data available in the EPA AQS database and therefore differ slightly from the values submitted in the North Carolina redesignation request.

3 The preliminary PM$_{2.5}$ ambient air quality data for 2010 for the Hickory Area indicates that the area may be considered to be attaining the NAAQS with 2008–2010 design values. This preliminary data includes complete data from all quarters of 2010 but has not yet been certified and is thus subject to change.
specific to 1997 Annual PM of title I of the CAA (requirements purposes of redesignation under part D SIP satisfies the criterion that it meet applicable SIP requirements for purposes of redesignation under part D of title I of the CAA (requirements specific to 1997 Annual PM nonattainment areas). Further, EPA proposes to determine that the SIP is fully approved with respect to all requirements applicable under section 110(k). In making these determinations, EPA ascertained which requirements are applicable to the Area and, if applicable, that they are fully approved under the CAA. For the purposes of review of the State’s redesignation request, the SIP needs only to be fully approved with respect to requirements that were applicable prior to submittal of the complete redesignation request.

a. Hickory Area Has Met All Applicable Requirements Under Section 110 and Part D of Title I of the CAA

General SIP requirements. Section 110(a)(2) of title I of the CAA delineates the general requirements for a SIP, which include enforceable emissions limitations and other control measures, means, or techniques; provisions for the establishment and operation of appropriate devices necessary to collect data on ambient air quality; and programs to enforce the limitations. General SIP elements and requirements are delineated in section 110(a)(2) of title I, part A of the CAA. These requirements include, but are not limited to, the following: submittal of a SIP that has been adopted by the state after reasonable public notice and hearing; provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality; implementation of a source permit program; provisions for the implementation of part C requirements (Prevention of Significant Deterioration (PSD)) and provisions for the implementation of part D requirements (New Source Review (NSR) permit programs); provisions for air pollution modeling; and provisions for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state. To implement this provision, EPA has required certain states to establish programs to address the interstate transport of air pollutants (e.g., NOx SIP Call, CAIR, and the CSAPR). The section 110(a)(2)(D) requirements for a state are not linked with a particular nonattainment area’s designation and classification in that state. EPA believes that the requirements linked with a particular nonattainment area’s designation and classifications are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to exist to ensure regardless of the designation of any one particular area in the state. Thus, EPA does not believe that the CAA’s interstate transport requirements should be construed to be applicable requirements for purposes of redesignation. However, as discussed later in this notice, addressing pollutant transport from other states is an important part of an area’s maintenance demonstration.

In addition, EPA believes other section 110 elements that are neither connected with nonattainment plan submissions nor linked with an area’s attainment status are applicable

*On October 27, 1998 (63 FR 57356), EPA issued a NOx SIP Call requiring the District of Columbia and 22 states to reduce emissions of NOx in order to reduce the transport of ozone precursor. In compliance with EPA’s NOx SIP Call, North Carolina developed rules governing the control of NOx emissions from Electric Generating Units (EGUs), major non-EGU industrial boilers, major cement kilns, and internal combustion engines. On December 27, 2002, EPA approved North Carolina’s rules as fulfilling Phase I (67 FR 78987).

*On May 12, 2005 (70 FR 25162), EPA promulgated CAIR which required 28 upwind States and the District of Columbia to revise their SIPs to include control measures that would reduce emissions of SO2 and NOx. Various aspects of CAIR rule were petitioned in court and on December 23, 2008, the U.S. Court of Appeals for the District of Columbia Circuit remanded CAIR to EPA (see North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir. 2008)) which left CAIR in place to “temporarily preserve the environmental value covered by CAIR” until EPA replaces it with a rule consistent with the Court’s ruling. The Court directed EPA to remedy various areas of the rule that were petitioned consistent with the Court’s opinion, but declined to impose a schedule on EPA for completing that action. Id. Therefore, CAIR is currently in effect in North Carolina.

requirements for purposes of redesignation. The area will still be subject to these requirements after the area is redesignated. The section 110 and part D requirements which are linked with a particular area’s designation and classification are the relevant measures to evaluate in reviewing a redesignation request. This approach is consistent with EPA’s existing policy on applicability (i.e., for redesignations) of conformity and oxidized fuels requirements, as well as with section 184 ozone transport requirements. See Reading, Pennsylvania, proposed and final rulemakings (61 FR 53174–53176, October 10, 1996), (62 FR 24826, May 7, 1997); Cleveland-Akron-Lorain, Ohio, final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida, final rulemaking at (60 FR 62748, December 7, 1995). See also the discussion on this issue in the Cincinnati, Ohio, redesignation (65 FR 37890, June 19, 2000), and in the Pittsburgh, Pennsylvania, redesignation (66 FR 50399, October 19, 2001).

EPA has not yet completed rulemaking on a submittal from North Carolina dated April 1, 2008, addressing “infrastructure SIP” elements required under CAA section 110(a)(2). However, these are statewide requirements that are not a consequence of the nonattainment status of the Hickory Area. As stated above, EPA believes that section 110 elements not linked to an area’s nonattainment status are not applicable for purposes of redesignation. Therefore, notwithstanding the fact that EPA has not yet completed rulemaking on North Carolina’s submittal for the PM2.5 infrastructure SIP elements of section 110(a)(2), EPA believes it has approved all SIP elements under section 110 that must be approved as a prerequisite for redesignating the Hickory Area to attainment.

Title I, Part D requirements. EPA proposes that with approval of North Carolina’s base year emissions inventory, which is part of the maintenance plan submittal, the North Carolina SIP will meet applicable SIP requirements under part D of title I of the CAA. As discussed in greater detail below, EPA believes the emissions inventory is approvable because the 2008 direct PM2.5, SO2, and NOx emissions for North Carolina were developed consistent with EPA guidance for emissions inventories and represent a comprehensive, accurate and current inventory as required by section 172(c)(3).

Part D, subpart 1 applicable SIP requirements. EPA has determined that
if the approval of the base year emissions inventories, discussed in section IX of this rulemaking, is finalized, the North Carolina SIP will meet the applicable SIP requirements for the Hickory Area for purposes of redesignation under title I, part D of the CAA. Subpart 1 of part D sets forth the basic nonattainment requirements applicable to all nonattainment areas. All areas that were designated nonattainment for the 1997 Annual PM$_2.5$ NAAQS were designated under this subpart of the CAA, and the requirements applicable to them are contained in sections 172 and 176. For purposes of evaluating this redesignation request, the applicable part D, subpart 1 SIP requirements for all nonattainment areas are contained in sections 172(c)(1)–(9) and in section 176. A thorough discussion of the requirements contained in section 172 can be found in the General Preamble for Implementation of title I (57 FR 13498, April 16, 1992).

Section 172 Requirements. Section 172(c)(1) requires the plans for all nonattainment areas to provide for the implementation of all reasonably available control measures (RACM) as expeditiously as practicable and to provide for attainment of the national primary ambient air quality standards. 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 each area as components of the area’s attainment demonstration. Under section 172, states with nonattainment areas must submit plans providing for timely attainment and meeting a variety of other requirements. However, pursuant to 40 CFR 51.1004(c), EPA’s January 5, 2010, determination that the Hickory Area was attaining the PM$_2.5$ standard suspended North Carolina’s obligation to submit most of the attainment planning requirements that would otherwise apply. Specifically, the determination of attainment suspended North Carolina’s obligation to submit an attainment demonstration and planning SIPs to provide for reasonable further progress (RFP), reasonable available control measures, and contingency measures under section 172(c)(9). The General Preamble for Implementation of Title I (57 FR 13498, April 16, 1992) also discusses the evaluation of these requirements in the context of EPA’s consideration of a redesignation request. The General Preamble sets forth EPA’s view of applicable requirements for purposes of evaluating redesignation requests when an area is attaining a standard (General Preamble for Implementation of Title I (57 FR 13498, April 16, 1992)). Because attainment has been reached in the Hickory Area, no additional measures are needed to provide for attainment, and section 172(c)(1) requirements for an attainment demonstration and RACM are no longer considered to be applicable for purposes of redesignation as long as the Area continues to attain the standard until redesignation. See also 40 CFR 51.1004(c).

The RFP plan requirement under section 172(c)(2) is defined as progress that must be made toward attainment. This requirement is not relevant for purposes of redesignation because EPA has determined that the Hickory Area has monitored attainment of the 1997 Annual PM$_2.5$ NAAQS. See General Preamble, 57 FR 13564. See also 40 CFR 51.1004(c). In addition, because the Hickory Area has attained the 1997 Annual PM$_2.5$ NAAQS and is no longer subject to RFP requirement, the requirement to submit the section 172(c)(9) contingency measures is not applicable for purposes of redesignation. Id.

Section 172(c)(3) requires submission and approval of a comprehensive, accurate, and current inventory of actual emissions. As part of North Carolina’s redesignation request for the Hickory Area, North Carolina submitted a 2008 base year emissions inventory. As discussed below in section IX, EPA is proposing to approve the 2008 base year inventory submitted with the redesignation request as meeting the section 172(c)(3) emissions inventory requirement.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified major stationary sources to be allowed in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA has determined that, since PSD requirements will apply after redesignation, areas being redesignated need not comply with the requirement that a NSR program be approved prior to redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, “Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment.” North Carolina has demonstrated that the Hickory Area will be able to maintain the NAAQS without part D NSR in effect and therefore North Carolina need not have fully approved part D NSR programs prior to approval of the redesignation request. Nonetheless, North Carolina currently has a fully-approved part D NSR program in place. North Carolina’s PSD program will become effective in the Hickory Area upon redesignation to attainment.

Section 172(c)(6) requires the SIP to contain control measures necessary to provide for attainment of the NAAQS. Because attainment has been reached, no additional measures are needed to provide for attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, EPA believes the North Carolina SIP meets the requirements of section 110(a)(2) applicable for purposes of redesignation.

Section 176 Conformity Requirements. Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine conformity applies to transportation plans, programs and projects that are developed, funded or approved under title 23 of the United States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other Federally supported or funded projects (general conformity). State transportation conformity SIP revisions must be consistent with Federal conformity regulations relating to consultation, enforcement and enforceability that EPA promulgated pursuant to its authority under the CAA.

EPA interprets the conformity SIP requirements as not applying for purposes of evaluating a redesignation request under section 107(d) because state conformity rules are still required after redesignation and Federal conformity rules apply where state rules have not been approved. See Wall v. EPA, 265 F.3d 426 (6th Cir. 2001)(upholding this interpretation); see also 60 FR 62748 (December 7, 1995, Tampa, Florida). Thus, the Hickory Area has satisfied all applicable requirements for purposes of redesignation under

---

CAA Section 176(c)(4)(E) requires states to submit revisions to their SIPs to reflect certain Federal criteria and procedures for determining transportation conformity. Transportation conformity SIPs are different from the MVEBs that are established in control strategy SIPs and maintenance plans.
b. The Hickory Area Has a Fully Approved Applicable SIP Under Section 110(k) of the CAA.

If EPA issues a final approval of the base year emissions inventories, EPA will have fully approved the applicable North Carolina SIP for the Hickory Area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation for the 1997 Annual PM\textsubscript{2.5} NAAQS. EPA may rely on prior SIP approvals in approving a redesignation request (see Calcagni Memorandum at p. 3; Southwestern Pennsylvania Growth Alliance v. Browner, 144 F.3d 984, 989–90 (6th Cir. 1998); Wall, 265 F.3d 426 (2001)).

Following passage of the CAA of 1970, North Carolina has adopted and submitted, and EPA has fully approved at various times, provisions addressing the various 1997 Annual PM\textsubscript{2.5} NAAQS SIP elements applicable in the Hickory Area (April 17, 1980, 45 FR 26038; August 27, 1981, 46 FR 43137; October 11, 1985, 50 FR 41501; November 19, 1986, 51 FR 4786; and December 19, 1986, 51 FR 45468).

As indicated above, EPA believes that the section 110 elements that are neither connected with nonattainment plan submissions nor linked to an area’s nonattainment status are not applicable requirements for purposes of redesignation. In addition, EPA believes that since the part D subpart 1 requirements did not become due prior to submission of the redesignation request, they are also not applicable requirements for purposes of redesignation. Sierra Club v. EPA, 375 F.3d 537 (7th Cir. 2004); 68 FR 25424, 25427 (May 12, 2003) [redesignation of the St. Louis-East St. Louis Area to attainment of the 1-hour ozone NAAQS]. With the approval of the emissions inventory, EPA will have approved all Part D subpart 1 requirements applicable for purposes of this redesignation.

Criteria (3)—The Air Quality Improvement in the Hickory Area 1997 Annual PM\textsubscript{2.5} NAAQS Nonattainment Area Is Due to Permanent and Enforceable Reductions in Emissions Resulting From Implementation of the SIP and Applicable Federal Air Pollution Control Regulations and Other Permanent and Enforceable Reductions

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and applicable Federal air pollution control regulations and other permanent and enforceable reductions (CAA section 107(d)(3)E(iii)). EPA believes North Carolina has demonstrated that the observed air quality improvement in the Hickory Area is due to permanent and enforceable reductions resulting from implementation of the SIP, Federal measures, and other state adopted measures.

Fine particulate matter, or PM\textsubscript{2.5}, refers to airborne particles less than or equal to 2.5 micrometers in diameter. Although treated as a single pollutant, fine particles come from many different sources and are composed of many different compounds. One of the largest components of PM\textsubscript{2.5} in the southeastern United States is sulfate, which is formed through various chemical reactions from the precursor SO\textsubscript{2}. The other major component of PM\textsubscript{2.5} is organic carbon, which originates predominantly from biogenic emission sources. Nitrate, which is formed from the precursor NO\textsubscript{X}, is also a component of PM\textsubscript{2.5}. Crustal materials from windblown dust and elemental carbon from combustion sources are less significant contributors to total PM\textsubscript{2.5}.

State and Federal measures enacted in recent years have resulted in permanent emission reductions. Most of these emission reductions are enforceable through regulations. A few non-regulatory measures also result in emission reductions.

The Federal measures that have been implemented include:

Tier 2 vehicle standards. In addition to requiring NO\textsubscript{X} controls, the Tier 2 rule reduced the allowable sulfur content of gasoline to 30 parts per million (ppm) starting in January of 2006. Most gasoline sold in North Carolina prior to this had a sulfur content of approximately 300 ppm.

Heavy-duty gasoline and diesel highway vehicle standards. The second phase of the standards and testing procedures, which began in 2007, reduces particulate matter (PM) and NO\textsubscript{X} from heavy-duty highway engines and also reduces highway diesel fuel sulfur content to 15 ppm. The total program is expected to achieve a 90 and 95 percent reduction in PM and NO\textsubscript{X} emissions from heavy-duty highway engines, respectively.

Nonroad spark-ignition engines and recreational engines standards. Tier 1 of this standard, implemented in 2004, and Tier 2, implemented in 2007, have reduced and will continue to reduce PM emissions.

Large nonroad diesel engine standards. Promulgated in 2004, this rule is being phased in between 2008 and 2014. This rule will reduce sulfur content in nonroad diesel fuel and, when fully implemented, will reduce NO\textsubscript{X} and direct PM\textsubscript{2.5} emissions by over 90 percent from these engines.

CAIR and the Cross-State Air Pollution Rule (CSAPR). As previously discussed, the remanded CAIR, originally promulgated to reduce transported pollution, was left in place to “temporarily preserve the environmental values covered by CAIR” until EPA replaced it with a rule consistent with the Court’s opinion. To remedy CAIR’s flaws, EPA promulgated the final CSAPR on August 8, 2011. CSAPR addresses the interstate transport requirements of the CAA with respect to the 1997 ozone, 1997 PM\textsubscript{2.5}, and 2006 PM\textsubscript{2.5} NAAQS. As noted previously, the requirements of CAIR address emissions beyond a control period and CSAPR requires similar or greater emission reductions in the relevant areas in 2012 and beyond.

The state measures that have been implemented to date and relied upon by North Carolina to demonstrate attainment and/or maintenance include:

NCCSA. The primary state-adopted measure is the NCCSA, enacted in June 2002. The NCCSA includes a schedule of system-wide caps on emissions of NO\textsubscript{X} and SO\textsubscript{2}, the first of which became effective in 2007, and has no provision for the trading of pollution credits from one utility to another. According to North Carolina, this rule requires coal-fired power plants in the State to reduce annual NO\textsubscript{X} emissions from 245,000 tons in 1998 to 56,000 tons by 2009 (a 77 percent reduction) and to reduce annual SO\textsubscript{2} emissions from 489,000 tons in 1998 to 250,000 tons by 2009 (a 49 percent reduction), and further SO\textsubscript{2} reductions to 130,000 tons in 2013 (a 73 percent reduction). Although there are no power plants located within the Hickory Area, there are power plants located around the Area. On August 21, 2009, North Carolina submitted a SIP revision to incorporate specific provisions of the NCCSA into the Federally approved SIP. On June 22, 2011, EPA approved the NCCSA rule as a revision to the SIP and expects to take final action on it in a rulemaking separate from today’s proposed action but prior to any final action on this redesignation.

Another significant rulemaking which has led to permanent and enforceable reductions is the NO\textsubscript{X} SIP Call rule. This rule was predicted to reduce...
summertime NO\textsubscript{x} emissions from power plants and other industries by over 60 percent in North Carolina by 2006. See Table III–5 of NO\textsubscript{x} SIP Call, 63 FR 57356, 57434 (October 27, 1998). These emission reductions are state and Federally enforceable.

Table 2 presents the annual emissions from North Carolina sources as recorded in EPA’s acid rain database. Since 2002, when the NO\textsubscript{x} controls started coming on-line to meet the NO\textsubscript{x} SIP Call, and later to meet the NCCSA, the annual NO\textsubscript{x} emissions from subject sources have decreased dramatically from 145,706 tons per year (tpy) in 2002 to 61,669 tpy in 2008. In 2009 the emissions decreased to 44,506 tpy—down more than 69 percent from 2002. Both 2005 and 2008, the annual SO\textsubscript{2} emissions from the utilities in North Carolina decreased by more than half from 500,936 tpy to 227,030 tpy, or nearly 274,000 tons reduced. In 2009 the emissions were again halved, down 76 percent from 2002. The decline in SO\textsubscript{2} emissions has coincided with a decline in annual PM\textsubscript{2.5} concentrations across North Carolina.

**TABLE 2—ANNUAL EMISSIONS FROM ALL NC SOURCES IN THE EPA CLEAN AIR MARKETS DATABASE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual SO\textsubscript{2} emissions (tons)</th>
<th>Annual NO\textsubscript{x} emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>462,993</td>
<td>145,706</td>
</tr>
<tr>
<td>2003</td>
<td>462,041</td>
<td>135,879</td>
</tr>
<tr>
<td>2004</td>
<td>472,320</td>
<td>124,079</td>
</tr>
<tr>
<td>2005</td>
<td>500,936</td>
<td>114,300</td>
</tr>
<tr>
<td>2006</td>
<td>462,143</td>
<td>108,584</td>
</tr>
<tr>
<td>2007</td>
<td>370,827</td>
<td>64,770</td>
</tr>
<tr>
<td>2008</td>
<td>227,030</td>
<td>61,669</td>
</tr>
<tr>
<td>2009</td>
<td>110,948</td>
<td>44,506</td>
</tr>
</tbody>
</table>

Other state measures have been implemented that are state enforceable but not a part of the Federally-enforceable SIP. Such measures contribute to reductions in pollutant emissions, although to a lesser extent than the ones identified above, and include the following:

**Clean Air Bill.** This state legislation expanded the inspection and maintenance program from 9 counties to 48 counties and was phased in for the Hickory Area from July 1, 2002, through July 1, 2003. This program reduces NO\textsubscript{x}, VOC, and carbon monoxide (CO) emissions.

**Open burning.** This regulation, originally approved in 1997, prohibits the burning of man-made materials throughout the State. Additionally, this regulation prohibits open burning of yard waste in areas for which the DAQ forecasts an air quality action day. The open burning regulation will reduce PM\textsubscript{2.5} emissions, as well as NO\textsubscript{x}, VOC and CO emissions.

**Diesel Retrofits.** As part of the North Carolina Mobile Source Emission Reduction Grants program, a number of cities, counties and school districts have installed diesel oxidation catalysts or diesel particulate filters on their diesel equipment. The vehicles that have been retrofitted include school buses and county fleet trucks used for solid waste pickup. These types of filters are designed to reduce PM engine emissions, and when used with ultra low sulfur diesel fuel, NO\textsubscript{x} and VOC emissions are also reduced. Even though these emission reductions are voluntary and not enforceable, they are still considered permanent reductions.

**Diesel Emissions Reduction Act (DERA).** DERA provides new diesel emissions reduction grant authority for EPA. This funding is used to achieve significant reductions in diesel emissions that improve air quality and protect public health. The DERA funds that the DAQ has received have been used to retrofit, repower, or replace existing diesel engines from on-road and nonroad mobile source vehicles and equipment. This program will reduce PM, NO\textsubscript{x}, and VOC emissions. Even though these emission reductions are voluntary, they are still considered permanent reductions once a retrofit is completed. To date, North Carolina has retrofitted over 6,000 diesel school buses. In addition to impacting local emissions in the nonattainment area, most of these measures impact emissions statewide.

EPA agrees with North Carolina’s assessment that, although PM\textsubscript{2.5} and PM\textsubscript{10} precursor reductions within the nonattainment area have contributed to improved air quality, the majority of the improvement in ambient PM\textsubscript{2.5} concentrations has resulted from reductions in SO\textsubscript{2} emissions from in-state coal-fired power plants due to the NCCSA. The annual emissions from these facilities have significantly decreased since 2005, with over 250,000 tons of SO\textsubscript{2} emission reductions in 2008 compared to 2005. EPA’s analysis of emissions data available in from the Clean Air Markets Division Web site (http://www.epa.gov/airmarkets/) shows that the statewide reductions in SO\textsubscript{2} emissions are much greater than any decreases in emissions that can be attributed to decreases in demand associated with reductions in operating hours or heat inputs at North Carolina power plants. While coal-fired electric power generation in North Carolina decreased 4.8 percent from 2005 to 2008,\textsuperscript{7} SO\textsubscript{2} emissions from coal-fired electric power plants declined 46.0 percent during the same period.

The NCCSA reductions took place beginning in 2006, the first year of the 3-year attainment period submitted by North Carolina for redesignation of the Hickory Area. Since the final compliance date for the NCCSA SO\textsubscript{2} emissions caps is 2013, future design values are expected to continue to decline below the 2006–2008 attaining design values. The significant statewide reductions in utility SO\textsubscript{2} emissions will be permanent and enforceable upon EPA’s approval of the NCCSA rules into the North Carolina SIP. Further, EPA does not have any information to suggest that the decrease in ambient PM\textsubscript{2.5} concentrations in the Hickory Area is due to unusually favorable meteorological conditions. Additionally, the emission reductions resulting from the NCCSA discussed above are of a greater magnitude than any influence that could be expected from meteorology. The 250,000 tons of SO\textsubscript{2} emission reductions since 2005 represents a greater than 41 percent reduction of statewide SO\textsubscript{2} emissions. It is reasonable to expect that such significant reductions have reduced ambient PM\textsubscript{2.5} levels throughout the State—including in the Hickory Area. Indeed, every PM\textsubscript{2.5} monitor in the State

\textsuperscript{7} Electric Power Annual 2009, DOE/EIA–0340(2009), North Carolina Electricity Profile, Tables 5 and 7. April 2011.
Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least 10 years after the Administrator approves a redesignation to attainment. Eight years after the redesignation, the State must submit a revised maintenance plan which demonstrates that attainment will continue to be maintained for the 10 years following the initial 10-year period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures as EPA deems necessary to assure prompt correction of any future 1997 Annual PM\textsubscript{2.5} violations. The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should address five requirements: the attainment emissions inventory, maintenance demonstration, monitoring, verification of continued attainment, and a contingency plan. As discussed more fully below, EPA believes this maintenance plan meets the requirements for approval under section 175A of the CAA.

a. What is required in a maintenance plan?

Section 175A of the CAA requires EPA to determine that the area has a fully approved maintenance plan pursuant to section 175A of the CAA (CAA section 107(d)(3)(E)(iv)). In conjunction with its request to redesignate the Hickory Area to attainment for the 1997 Annual PM\textsubscript{2.5} NAAQS, DAQ submitted a SIP revision to provide for the maintenance of the 1997 Annual PM\textsubscript{2.5} NAAQS for at least 10 years after the effective date of redesignation to attainment. EPA finds that North Carolina’s maintenance plan includes all the necessary components and is thus proposing to approve it as a revision to the North Carolina SIP, provided that EPA takes final action to approve the NCCSSA rules.

b. Attainment Emissions Inventory

The Hickory Area first attained the 1997 Annual PM\textsubscript{2.5} NAAQS based on monitoring data for the 3-year period 2006–2008. North Carolina selected 2008 as the attainment emissions inventory year in part because it was already in the process of developing some emissions inventory data for this year. The attainment inventory identifies a level of emissions in the Area that is sufficient to attain the 1997 Annual PM\textsubscript{2.5} NAAQS. North Carolina began development of the attainment inventory by first generating a baseline emissions inventory for the Hickory Area. As noted above, the year 2008 was chosen as the base year for developing a comprehensive emissions inventory for primary PM\textsubscript{2.5}, SO\textsubscript{2}, and NO\textsubscript{X}, for which projected emissions could be developed for 2011, 2014, 2017, and 2021. In addition to comparing the final year of the plan, 2021, to the base year, 2008, North Carolina compared interim years to the 2008 baseline to demonstrate that these years are also expected to show continued maintenance of the annual PM\textsubscript{2.5} standard.

The emissions inventories are composed of four major types of sources: point, area, on-road mobile, and non-road mobile. The future year emissions inventories have been estimated using projected rates of growth in population, traffic, economic activity, expected control programs, and other parameters. Non-road mobile emissions estimates were based on EPA’s NONROAD2008, a non-road mobile model, with the exception of railroad locomotive and aircraft engine emissions. The railroad locomotive and aircraft engine emissions were estimated by taking activity data, such as landings and takeoffs, and multiplying by an emission factor. On-road mobile source emissions were calculated using EPA’s MOVES mobile emission factors model. The 2008 SO\textsubscript{2}, NO\textsubscript{X} and PM\textsubscript{2.5} emissions for the Hickory Area, as well as the emissions for other years, were developed consistent with EPA guidance and are summarized in Tables 3 and 4 of the following subsection discussing the maintenance demonstration.

c. Maintenance Demonstration

The December 18, 2009, final submittal and December 22, 2010, supplement included a maintenance plan for the Hickory Area. This demonstration:

(i) Shows compliance with and maintenance of the annual PM\textsubscript{2.5} standard by providing information to support the demonstration that current and future emissions of SO\textsubscript{2}, NO\textsubscript{X} and PM\textsubscript{2.5} remain at or below 2008 SO\textsubscript{2}, NO\textsubscript{X}, and PM\textsubscript{2.5} emissions levels.

(ii) Uses 2008 as the attainment year and includes future emission inventory projections for 2011, 2014, 2017, and 2021, as shown in Tables 3 and 4 below.

(iii) Identifies an “out year” at least 10 years (and beyond) after the time necessary for EPA to review and approve the maintenance plan. Per 40 CFR part 93, NO\textsubscript{X} MVEBs were established for the last year (2021) of the maintenance plan. Additionally, North Carolina chose, through interagency consultation, to establish NO\textsubscript{X} MVEBs for 2011 (see section VII below).

(iv) Provides, as shown in Table 4 below, the actual and projected emissions inventories, in tpy, for the Hickory Area.

Table 3—Actual and Projected NO\textsubscript{X}, SO\textsubscript{2}, and PM\textsubscript{2.5} Emissions From All Source Categories for Catawba County in the Hickory Area (TPY)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011</th>
<th>2014</th>
<th>2017</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point</td>
<td>13310</td>
<td>10549</td>
<td>10548</td>
<td>10548</td>
<td>10548</td>
</tr>
<tr>
<td>Area</td>
<td>662</td>
<td>614</td>
<td>586</td>
<td>520</td>
<td>454</td>
</tr>
<tr>
<td>On-road Mobile</td>
<td>4982</td>
<td>4005</td>
<td>3240</td>
<td>2591</td>
<td>2054</td>
</tr>
<tr>
<td>Non-road Mobile</td>
<td>1173</td>
<td>922</td>
<td>700</td>
<td>551</td>
<td>453</td>
</tr>
<tr>
<td>Total</td>
<td>20127</td>
<td>16090</td>
<td>15054</td>
<td>14210</td>
<td>13509</td>
</tr>
</tbody>
</table>

SO\textsubscript{2}:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011</th>
<th>2014</th>
<th>2017</th>
<th>2021</th>
</tr>
</thead>
</table>

\*http://www.epa.gov/airtrends/values.html.  
\*PM\textsubscript{2.5} MVEBs are not required for the Hickory Area due to the insignificance determination for the motor vehicle PM\textsubscript{2.5} contribution.
Tables 3 and 4 summarize the 2008 and future projected emissions of direct PM$_{2.5}$ and precursors from the counties in the Hickory Area. In situations where local emissions are the primary contributor to nonattainment, the ambient air quality standard should not be violated in the future as long as emissions from within the nonattainment area remain at or below the baseline with which attainment was achieved. In the Hickory Area, however, the preponderance of the nonattainment problem is due to SO$_2$ emissions from power plants outside the nonattainment area, but within North Carolina. As shown by the speciation data in the State’s submittal, sulfate are one of the largest contributors to ambient PM$_{2.5}$ in the Hickory Area and in the State as a whole, contributing about 30 percent of the total PM$_{2.5}$ mass. Sulfates are formed through various SO$_2$ reactions in the atmosphere. According to EPA’s National Emissions Inventory for 2005 and Clean Air Markets Division acid rain database, over 90 percent of SO$_2$ emissions in North Carolina were from stationary point sources, greater than 80 percent of which were from power plants reporting to the acid rain program. Organic carbon, which also contributes about 30 percent of the total PM$_{2.5}$ mass in the Hickory Area, is predominately attributed to biogenic emission sources. The next largest contributor in the Hickory Area is an “other” group that is attributed to water, sea salts, and other trace materials and which accounts for about 17 percent of the mass.

Because the most significant sources contributing to ambient PM$_{2.5}$ levels in the Hickory Area are utilities located outside the nonattainment area, but within North Carolina, reductions in emissions from these point sources provide the greatest potential for reductions in ambient PM$_{2.5}$ concentrations. For this reason, the State presented information in its submittal (as discussed above in the section on permanent and enforceable reductions) showing that the NCCCSA requires these sources to reduce their emissions by substantial amounts that are more than sufficient for the Hickory Area to demonstrate attainment and maintenance of the PM$_{2.5}$ NAAQS at issue here. EPA has proposed rulemaking action to approve specific provisions of the NCCSA into the North Carolina SIP, and final approval would assure that power plants within North Carolina will remain sufficiently regulated to provide for continued maintenance as required by CAA section 175A.

With regard to emissions generated outside North Carolina which have the potential to impact the Hickory Area, EPA notes several recent emissions reductions that have occurred or will occur in nearby states. First, On April 14, 2011, EPA announced a settlement with the Tennessee Valley Authority (TVA) to resolve alleged Clean Air Act violations at 11 of its coal-fired plants in Alabama, Kentucky, and Tennessee. The settlement will require TVA to invest a TVA estimated $3 billion to $5 billion on new and upgraded state-of-the-art pollution controls. When fully implemented, the pollution controls and other required actions will address 92 percent of TVA’s coal-fired power plant capacity, reducing emissions of NO$_X$ by 69 percent and SO$_2$ by 67 percent from TVA’s 2008 emission levels. The settlement will also significantly reduce particulate matter and carbon dioxide (CO$_2$) emissions. The consent decree also requires that operation of 18 coal-fired units at the Johnsonville, John Sevier, and Widows Creek plants be phased out by 2017. Second, the State of Georgia has recently passed a multi-pollutant rule to reduce NO$_X$ and SO$_2$ emissions from...
many of its coal-fired EGU’s. Third, the consent decrees for Dominion Power and American Electric Power (AEP) in the Commonwealth of Virginia require further controls of NOX and SO2 emissions at those power plants. On April 21, 2003, the Department of Justice and EPA announced a settlement against Virginia Electric and Power Company (VEPCO a subsidiary of Dominion Resources, Inc.). This settlement requires VEPCO, one of the nation’s largest coal-fired electric utilities, to install new pollution control equipment and to upgrade existing controls on several units in its system, thus resulting in substantial air pollution reductions. The settlement covers eight VEPCO plants, six in Virginia and two in West Virginia, comprising twenty electricity-generating units. These eight plants emitted over 350,000 tons of SO2 and NOX in 2000. The settlement will reduce these emissions to approximately 86,500 tpy SO2 and 26,000 tpy NOX. On October 9, 2007, the United States, along with eight individual states and thirteen citizen groups, announced a settlement agreement with AEP that that mandates emissions reductions at sixteen of AEP’s coal-fired power plants (46 units) located in Indiana, Kentucky, Ohio, Virginia, and West Virginia. NOX emissions from subject plants will be reduced by greater than 68 percent by 2016 as compared to 2006 levels. Likewise, by 2018 SO2 emissions will decrease by greater than 78 percent as compared to 2006 levels.

Finally, EPA has recently finalized the CSAPR to regulate interstate transport of power plant emissions. EPA’s modeling for the final rule indicates that the Hickory Area would maintain the NAAQS into the future in the absence of the rule. The 2012 base case run, which simulates air quality from emissions transported across state lines, has been adequately addressed for the Hickory Area and that the Hickory Area will maintain the annual PM2.5 standard through 2021. Furthermore, the final CSAPR mandates even greater reductions than have already occurred and, more importantly, any reductions in PM2.5 in the Hickory Area from the final CSAPR will be in excess of those needed to maintain the Annual PM2.5 NAAQS.

A maintenance plan requires the state to show that projected future year emissions will not exceed the level of emissions which led the Area to attain the NAAQS. North Carolina has projected emissions as described previously and determined that emissions in the Hickory Area will remain below those in the attainment year inventory until 2021. As discussed further in section VII of this proposed rulemaking, a safety margin is the difference between the attainment level of emissions (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. The attainment level of emissions is the level of emissions during one of the years in which the Area met the NAAQS. North Carolina has decided to allocate a portion of the available safety margins to the Area’s NOX MVEBs for 2011 and 2021 for the Hickory Area and has calculated the safety margin in its submittal. Specifically, a total of 363,327 kg/year16 (400 tpy) and 372,671 kg/year (411 tpy) of the available NOX safety margins are allocated to the 2011 and 2021 MVEB, respectively. The remaining safety margins for NOX are 3,637 tpy and 6,207 tpy for 2011 and 2021, respectively. This allocation and the resulting available safety margin for the Hickory Area are discussed further in section VII of this proposed rulemaking.

d. Monitoring Network

There are currently three monitors measuring PM2.5 in the Hickory Area. The State of North Carolina, through DAQ, has committed to continue operation of the monitors in the Hickory Area in compliance with 40 CFR part 58 and have thus addressed the requirement for monitoring. EPA approved North Carolina’s 2010 monitoring plan on September 22, 2010.

e. Verification of Continued Attainment

The State of North Carolina, through DAQ, has the legal authority to enforce and implement the requirements of the Hickory Area 1997 Annual PM2.5 Maintenance Plan. This includes the authority to adopt, implement and enforce any subsequent emissions control contingency measures determined to be necessary to correct future PM2.5 attainment problems. DAQ will track the progress of the maintenance plan by performing future reviews of triennial emission inventories for the Hickory Area using the latest emissions factors, models and methodologies. For these periodic inventories, DAQ will review the assumptions made for the purpose of the maintenance demonstration concerning projected growth of activity levels. If any of these assumptions appear to have changed substantially, the DAQ will re-project emissions for the Hickory Area.

f. Contingency Measures in the Maintenance Plan

The contingency measures are designed to promptly correct a violation of the NAAQS that occurs after redesignation. Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to assure that the state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a time limit for action by the state. A state should also identify specific indicators to be used to determine when the contingency measures need to be implemented. The maintenance plan must include a requirement that a state will implement all measures with respect to control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d).

13 Georgia Rule 391–1–02(2)(uuu), “SO2 Emissions from Electric Utility Steam Generating Units,” was first adopted by the Georgia Board of Natural Resources January 28, 2009, with an amendment adopted June 24, 2009.


16 Conversion factor from grams to tons = 907185 grams per ton.
In the December 18, 2009, submittal, North Carolina affirms that all programs instituted by the State and EPA for PM control will remain enforceable and that sources are prohibited from reducing emissions controls following the redesignation of the Area. The contingency plan included in the December 18, 2009, submittal includes a 3-step triggering mechanism to determine when contingency measures are needed and a process of developing and implementing appropriate control measures. The secondary and tertiary triggers are pre-violation triggers and thus activation does not necessarily mean a violation of the actual annual PM$_{2.5}$ NAAQS has occurred or will occur. The pre-violation triggers allow the State to begin evaluating the causes of increased ambient PM$_{2.5}$ concentrations and take corrective action to prevent a future violation. In the contingency plan, North Carolina has committed to taking action on the activation of a primary or secondary trigger. These triggers and the actions resulting from them are discussed more fully below.

The primary trigger will occur when the certified 3-year average of the average annual ambient concentration is greater than 15.0 µg/m$^3$ at any monitor in the maintenance area. The resulting trigger date will be 60 days after the date that the State observes an annual average concentration that, when averaged with the previous two annual average PM$_{2.5}$ concentrations, would result in a 3-year design value greater than 15.0 µg/m$^3$. North Carolina has identified a secondary warning trigger to occur when the State finds that the rolling twelve-quarter average monitored PM$_{2.5}$ levels exceed the PM$_{2.5}$ NAAQS in the Hickory Area (non-calendar year basis). The trigger date will be 60 days from the date that the State observes that the rolling 12-quarter average is greater than 15.0 µg/m$^3$. A tertiary (third type of) trigger will be activated when a monitor in the Hickory Area has an annual average greater than 15.0 µg/m$^3$. In addition to the triggers indicated above, North Carolina will track regional emissions submitted annually for large sources or every three years for other sources through the Consolidated Emissions Reporting Rule and Air Emissions Reporting Rule and compare them to the projected inventories and attainment year inventory. North Carolina commits to review those emissions inventories and evaluate assumptions made to project emissions in the maintenance plan to determine if unexpected growth in NO$\text{X}$, SO$_2$ or PM$_{2.5}$ in the Area will jeopardize maintenance of the 1997 Annual PM$_{2.5}$ NAAQS.

Once a primary or secondary trigger is activated, DAQ will commence analysis, including trajectory analysis, and emissions inventory assessment to determine emission control measures that will be required to attain or maintain the 1997 Annual PM$_{2.5}$ NAAQS. PM$_{2.5}$ speciation data from the speciation trends network monitors will also be reviewed to help determine which control measures would be most effective. If it is determined that the violation or exceedance of the PM$_{2.5}$ NAAQS is due to sources outside of North Carolina, then DAQ will consult with EPA on its findings and determinations on what contingency measures will be implemented to reduce emissions. If EPA and DAQ agree that the violation or exceedance was due to sources outside of North Carolina, DAQ will consult with regulatory authorities from contributing up-wind sources to determine additional actions to be implemented.\textsuperscript{17}

If DAQ determines that a violation or exceedance occurred due to sources within North Carolina, then by November 1 of the year following the year which caused the primary or secondary trigger activation, the State will complete sufficient analysis to begin adoption of necessary rules for ensuring attainment and maintenance of the annual PM$_{2.5}$ NAAQS. If the rules are still needed, they would become State effective within 7 months after the November 1 analysis (by the following July 1), unless legislative review is required. Each adopted rule will include a schedule that will require compliance with the rule no later than 2 years after adoption of the rule.

At least one of the following contingency measures will be adopted and implemented upon a primary or secondary triggering event:

- Continued implementation of previously adopted controls (NCCSA and diesel retrofits) which have not yet been realized but are sufficient to address the violation (and in excess of emissions reductions considered for maintenance);
- Reasonably Available Control Technology on stationary sources in the Hickory Area;
- Diesel inspection and maintenance program;\textsuperscript{18}
- Implementation of diesel retrofit programs, including incentives for performing retrofits;
- Additional controls in upwind areas within North Carolina.

When a tertiary trigger is activated, DAQ will commence analyses including meteorological evaluation, trajectory analyses, and emissions inventory assessment to understand why an annual exceedance of the standard has occurred. DAQ will work with the local air awareness program and develop an outreach plan to identify any additional voluntary measures that can be implemented and implement the plan during the following summer.

As designed, a tertiary trigger will always occur before a primary trigger because it is based on an annual average, whereas the primary trigger is based on an average of three consecutive annual averages. This means DAQ will commence analyzing the cause of higher ambient PM$_{2.5}$ levels in the Area well before an actual NAAQS violation occurs. Further, a secondary trigger is likely to occur before a primary trigger because it is determined at the end of each calendar quarter based on a rolling 12-quarter average. This means that if the Area were to experience a NAAQS violation, DAQ will have likely already commenced the process for adoption of control measures as described above. EPA is now making the preliminary determination that the contingency measures outlined above in North Carolina’s contingency plan are adequate and ensure that the State will promptly correct any future violation of the 1997 Annual PM$_{2.5}$ NAAQS in the Hickory Area.

EPA has concluded that the Hickory Area maintenance plan adequately addresses the five basic components of a maintenance plan: attainment inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan. Provided that EPA takes final rulemaking to approve the NCCSA, the maintenance plan SIP revision submitted by the State of North

\textsuperscript{17} In a letter dated May 20, 2011, North Carolina provided additional clarification on the timing and content of their contingency plan. In the letter, North Carolina clarified that it is there intent to take corrective measures to address a violation of the 1997 Annual PM$_{2.5}$ NAAQS within 18–24 months of the violation. This letter is available in the docket EPA–R04–OAR–2009–1011 on the http:// www.regulations.gov Web site.

\textsuperscript{18} At this time, there is not an approved method for determining emission reductions from a Diesel Inspection and Maintenance program. Therefore, there is no technical basis to award emission credits for a heavy duty diesel inspection and maintenance program in the SIP. However, we do not want to preclude future technical changes that may make awarding such emission credits possible. If it is necessary to implement contingency measures for this area, North Carolina, in coordination with EPA, will evaluate the feasibility of this program as a contingency measure at that time. If a technical basis for emission credits is not available, other contingency measures will need to be implemented.
Carolina for the Hickory Area meets the requirements of section 175A of the CAA and is approvable.

VII. What Is EPA’s Analysis of North Carolina’s Proposed Direct PM₂.₅ Insignificance Determination and the Proposed NOₓ MVEBs for the Hickory Area?

Under section 176(c) of the CAA, new transportation plans, programs, and projects, such as the construction of new highways, must “conform” to (i.e., be consistent with) the part of the state’s air quality plan that addresses pollution from cars and trucks. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS or any interim milestones. If a transportation plan does not conform, most new projects that would expand the capacity of roadways cannot go forward. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of such transportation activities to a SIP. The regional emissions analysis is one, but not the only, requirement for implementing transportation conformity. Transportation conformity is a requirement for nonattainment and maintenance areas. Maintenance areas are areas that were previously nonattainment for a particular NAAQS but have since been redesignated to attainment with an approved maintenance plan for that NAAQS.

Under the CAA, states are required to submit, at various times, control strategy SIPs and maintenance plans for nonattainment areas. These control strategy SIPs (including RFP and attainment demonstration) and maintenance plans create MVEBs for criteria pollutants and/or their precursors to address pollution from cars and trucks. Per 40 CFR part 93, an MVEB must be established for the last year of the maintenance plan. A state may adopt MVEBs for other years as well. The MVEB is the portion of the total allowable emissions in the maintenance demonstration that is allocated to highway and transit vehicle use and emissions. See 40 CFR 93.101. The MVEB serves as a ceiling on emissions from an area’s planned transportation system. The MVEB concept is further explained in the preamble to the November 24, 1993, Transportation Conformity Rule (58 FR 62188). The preamble also describes how to establish the MVEB in the SIP and how to revise the MVEB.

Today’s actions address two related elements regarding on-road motor vehicle emissions and the requirement to establish MVEBs. First, EPA is proposing to find that the direct PM₂.₅ emission contribution from motor vehicles to PM₂.₅ pollution in the Hickory Area is insignificant. The result of this determination, if finalized, is that North Carolina will not need to develop an MVEB for direct PM₂.₅ for the Hickory Area and the MPO will not need to perform a regional emissions analysis for direct PM₂.₅ when it demonstrates conformity. See below for further information on the insignificant contributor determination. Second, EPA is proposing to approve the NOₓ MVEBs for the Hickory Area.

Direct PM₂.₅ insignificance. For motor vehicle emissions budgets to be approvable, they must meet, at a minimum, EPA’s adequacy criteria (40 CFR 93.118(e)(4)). In certain instances, the Transportation Conformity Rule allows areas to forgo establishment of an MVEB where it is demonstrated that the regional motor vehicle emissions for a particular pollutant or precursor are an insignificant contributor to the air quality problem in an area. The general criteria for insignificance determinations can be found in 40 CFR 93.109(m). Insignificance determinations are based on a number of factors, including (1) The percentage of motor vehicle emissions in context of the total SIP inventory; (2) the current state of air quality as determined by monitoring data for that NAAQS; (3) the absence of SIP motor vehicle control measures; and (4) historical trends and future projections of the growth of motor vehicle emissions. EPA’s rationale for the providing for insignificance determinations is described in the July 1, 2004, revision to the Transportation Conformity Rule at 69 FR 40004. Specifically, the rationale is explained on page 40061 under the subsection entitled “XXIII. B. Areas With Insignificant Motor Vehicle Emissions.” Any insignificance determination under review of EPA is subject to the adequacy and approval process for EPA’s action on the SIP. Through the adequacy and SIP approval process, EPA may find that a SIP demonstrates that regional motor vehicle emissions are an insignificant contributor to the air quality problem for the pollutant or precursor at issue. In the case of the Hickory Area, EPA made its insignificance determination for directly emitted PM₂.₅ as part of the adequacy process on May 2, 2011 (76 FR 24475). As a result of EPA’s insignificance determination, the Hickory Area was no longer required to perform regional emissions analyses for directly emitted PM₂.₅ as part of future PM₂.₅ conformity determinations for the 1997 Annual PM₂.₅ NAAQS until such time that EPA reviewed and took action on Hickory redesignation request for the 1997 Annual PM₂.₅ NAAQS (the subject of this proposed action). Upon the effective date of EPA’s adequacy determination, Federal regulations no longer require a regional emissions analysis (for the purpose of transportation conformity implementation) for the relevant pollutant or precursor. Areas with insignificant regional motor vehicle emissions for a pollutant or precursor are still required to make a conformity determination that satisfies other relevant conformity requirements. Additionally, such areas are required to satisfy the regional emissions analysis requirements for pollutants or precursors for which EPA has not made a determination of insignificance.

The maintenance plan for the Hickory Area, included as part of the SIP revision, contains MVEBs for NOₓ and an insignificance determination for the direct PM₂.₅ contribution of motor vehicles to the air quality problem in the Hickory Area. As part of the preparation for its redesignation request, North Carolina consulted with the interagency consultation group for the Hickory Area regarding the direct PM₂.₅ insignificance determination. For the purposes of regional emissions analysis, the information provided by North Carolina supports EPA’s proposal to determine that the PM₂.₅ contribution from motor vehicles to PM₂.₅ pollution in the Hickory Area is insignificant. The information provided by North Carolina to EPA, as part of the SIP revision, addresses each of the factors listed in 40 CFR 93.109(m) and is summarized below. The 2009 on-road PM₂.₅ emissions account for less than two percent of the total direct PM₂.₅ from all sources in the Hickory Area SIP inventory. In addition, direct PM₂.₅ emissions from on-road mobile sources decreased by 25 percent from 2002–2009 (100 tpy to 75 tpy) while vehicle miles traveled (VMT) increased 14 percent during the same time frame. As shown in Table 3 above, North Carolina’s maintenance plan demonstrates that on-road PM₂.₅ emissions will continue to decrease through 2021, the end of the growth maintenance plan for the Hickory Area. In addition, since 2006, the PM₂.₅
annual average concentration has decreased by 32 percent such that the Area is now attaining the Annual PM\textsubscript{2.5} NAAQS with a 2007–2009 design value of 12.6 \mu g/m\textsuperscript{3}, well below the standard of 15.0 \mu g/m\textsuperscript{3}. According to information provided by North Carolina, point sources contributed nearly 97 percent of the emissions in future years in the Hickory Area. Support for these percentages is found in Figure 4.5.2–3, located in the supplemental Appendix C.3—Mobile Source Inventory Documentation North Carolina’s submittal (available in the Docket for this proposed rulemaking). In addition, North Carolina conducted a sensitivity analysis that doubled the PM\textsubscript{2.5} emissions from on-road mobile sources in 2008 which indicated a negligible difference (0.04 \mu g/m\textsuperscript{3}) in the PM\textsubscript{2.5} modeling design value in Catawba County. As a result, the information provided by North Carolina indicates that the direct PM\textsubscript{2.5} contribution from on-road mobile sources to PM\textsubscript{2.5} pollution is insignificant for the Hickory Area.

With regard to the factor relating to the absence of motor vehicle control measures in the SIP, EPA considered the existence of a vehicle inspection and maintenance program in the North Carolina SIP and its implementation in Catawba County comprising the Hickory Area. The program, which was added to the North Carolina SIP to control precursors of ozone rather than as a PM\textsubscript{2.5} control measure, is currently being implemented in the Hickory Area.

After evaluating the information provided by North Carolina and weighing the factors for the insignificance determination outlined in 40 CFR 93.109(m), EPA is now proposing to approve North Carolina’s determination that the direct PM\textsubscript{2.5} contribution from motor vehicle emissions to the PM\textsubscript{2.5} problem in the Hickory Area is insignificant. EPA’s insignificance finding should be considered and specifically noted in the transportation conformity documentation that is prepared for the Area.

After interagency consultation with the transportation partners for the Hickory Area, North Carolina has developed MVEBs for NO\textsubscript{x} for the entire Area. North Carolina developed these MVEBs, as required, for the last year of its maintenance plan—2021. Additionally, the State of North Carolina has elected to develop MVEBs for the year 2011. The MVEBs reflect the total on-road emissions for 2011 and 2021, plus a safety margin that is based on an allocation from the available NO\textsubscript{x} safety margin. Under 40 CFR 93.101, the safety margin is the difference between the emissions level needed for attainment (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. The safety margin can be allocated to the transportation sector, however, the total emissions must remain below the attainment level. These MVEBs and allocation from the safety margin were developed in consultation with the transportation partners and were calculated to account for uncertainties in population growth, changes in modeled vehicle miles traveled and new emission factor models. The NO\textsubscript{x} MVEBs for the Hickory Area are defined in Table 5 below.

### TABLE 5—HICKORY AREA NO\textsubscript{x} MVEBS

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Road Mobile Emissions</td>
<td>3,633,274</td>
<td>1,863,357</td>
</tr>
<tr>
<td>Safety Margin Allocated to MVEB</td>
<td>363,327</td>
<td>372,671</td>
</tr>
<tr>
<td>NO\textsubscript{x} Conformity MVEB</td>
<td>3,996,601</td>
<td>2,236,028</td>
</tr>
</tbody>
</table>

As mentioned above, the Hickory Area has chosen to allocate a portion of the available safety margin to the NO\textsubscript{x} MVEBs for the years 2011 and 2021. A total of 363,327 kg/year (400 tpy) and 372,671 kg/year (411 tpy) of the available NO\textsubscript{x} safety margins are allocated to the 2011 and 2021 MVEB, respectively. Thus, the remaining safety margins in 2011 and 2021 are 4,524 tpy and 7,093 tpy, respectively.

Through this rulemaking, EPA is proposing to approve the MVEBs for NO\textsubscript{x} for 2011 and 2021, including the allocation from the NO\textsubscript{x} safety margins, for the Hickory Area because EPA has made the preliminary determination that the Area maintains the 1997 Annual PM\textsubscript{2.5} NAAQS with the emissions at the levels of the budgets. Once the MVEBs for the Hickory Area are approved or found adequate (whichever is completed first), they must be used for future conformity determinations and the MPOs must use the MOVES model in future PM\textsubscript{2.5} conformity determinations for their long-range transportation plans and transportation improvement programs. After thorough review, EPA has determined that the budgets meet the adequacy criteria, as outlined in 40 CFR 93.118(e)(4), and is proposing to approve the budgets because they are consistent with maintenance of the Annual PM\textsubscript{2.5} NAAQS through 2021.

VIII. What is the status of EPA’s adequacy determination for the proposed NO\textsubscript{x} MVEBs for 2011 and 2021 and for the direct PM\textsubscript{2.5} insignificance determination for the Hickory Area?

When reviewing a submitted “control strategy” SIP or maintenance plan containing an MVEB, EPA may affirmatively find the MVEB contained therein adequate for use in determining transportation conformity. Once EPA affirmatively finds the submitted MVEB is adequate for transportation conformity purposes, that MVEB must be used by state and Federal agencies in determining whether proposed transportation projects conform to the SIP as required by section 176(c) of the CAA.

EPA’s substantive criteria for determining adequacy of an MVEB are set out in 40 CFR 93.118(e)(4). The process for determining adequacy consists of three basic steps: public notification of a SIP submission, a public comment period, and EPA’s adequacy determination. This process for determining the adequacy of submitted MVEBs for transportation conformity purposes was initially outlined in EPA’s May 14, 1999, guidance, “Conformity Guidance on Implementation of March 2, 1999, Conformity Court Decision.” EPA adopted regulations to codify the adequacy process in the Transportation Conformity Rule Amendments for the “New 8-Hour Ozone and PM\textsubscript{2.5} National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments—Response to Court Decision and Additional Rule Change,” on July 1, 2004 (69 FR 40004). Additional information on the adequacy
process for transportation conformity purposes is available in the proposed rule entitled, “Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes,” 68 FR 38974, 38984 (June 30, 2003).

As discussed earlier, North Carolina’s maintenance plan submission includes NO\textsubscript{X} MVEBs for the Hickory Area for the years 2011 and 2021. EPA reviewed the NO\textsubscript{X} MVEBs through the adequacy process. The North Carolina SIP submission, including the Hickory Area NO\textsubscript{X} MVEBs, was open for public comment on EPA’s adequacy Web site on November 23, 2010. Found at: http://www.epa.gov/otaq/statesources/transconf/currentsips.htm. The EPA public comment period on adequacy NO\textsubscript{X} MVEBs for 2011 and 2021 for Hickory Area closed on December 23, 2010. EPA did not receive any comments on the adequacy of the MVEBs, nor did EPA receive any requests for the SIP submittal.

In a letter sent on February 3, 2011, EPA notified North Carolina DAQ that the MOVES based 2011 and 2021 MVEBs for the Hickory Area were determined to be adequate for transportation conformity purposes. On May 2, 2011, EPA published its adequacy notice in the Federal Register (76 FR 24475). When EPA finds the 2011 and 2021 MVEBs adequate or approves them, the new MVEBs for NO\textsubscript{X} must be used for future transportation conformity determinations. For required regional emissions analysis years prior to 2011, the applicable budgets are the 2009 MVEBs and direct PM\textsubscript{2.5} insignificance determination from the attainment demonstration, which have already been found adequate through another action (75 FR 9204 and 75 FR 26751). For required regional emissions analysis years that involve 2011–2020, the applicable budgets will be the new 2011 MVEBs. For required regional emissions analysis years that involve 2021 or beyond, the applicable budgets will be the new 2021 MVEBs. The 2011 and 2021 MVEBs are defined in section VII of this proposed rulemaking.

IX. What is EPA’s analysis of the proposed 2008 base year emissions inventory for the Hickory Area?

As discussed in section VI above, section 172(c)(3) of the CAA requires areas to submit a comprehensive, accurate and current emissions inventory. As part of North Carolina’s request to redesignate the Hickory Area, the State submitted a 2008 base year emissions inventory to meet this requirement. Emissions contained in the submittal cover the general source categories of point sources, area sources, on-road mobile sources, and non-road mobile sources. All emission summaries were accompanied by source-specific descriptions of emission calculation procedures and sources of input data. On December 22, 2010, DAQ provided EPA with a supplemental SIP revision to update the on-road mobile emissions by replacing the on-road mobile emissions that were prepared with MOBILE6.2 with on-road emissions that were prepared using the new MOVES emissions model. North Carolina’s submittal documents 2008 emissions in the Hickory Area in units of tpy. Table 6 below provides a summary of the 2008 emissions of direct PM\textsubscript{2.5}, NO\textsubscript{X}, and SO\textsubscript{2} for the Hickory Area. For emissions in other years, refer to Tables 3 and 4.

<table>
<thead>
<tr>
<th>Source</th>
<th>PM\textsubscript{2.5} [tpy (percent)]</th>
<th>NO\textsubscript{X} [tpy (percent)]</th>
<th>SO\textsubscript{2} [tpy (percent)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Source Total</td>
<td>6,976 [88.4]</td>
<td>13,310 [66.1]</td>
<td>6,189 [72.8]</td>
</tr>
<tr>
<td>On-Road Mobile Source Total</td>
<td>166 [2.1]</td>
<td>4,982 [24.8]</td>
<td>35 [0.4]</td>
</tr>
<tr>
<td>Non-Road Mobile Source Total</td>
<td>70 [0.9]</td>
<td>1,173 [5.8]</td>
<td>18 [0.2]</td>
</tr>
<tr>
<td>Total for all Sources</td>
<td>7,894</td>
<td>20,127</td>
<td>8,505</td>
</tr>
</tbody>
</table>

In today’s notice, EPA is proposing to approve this 2008 base year inventory as meeting the section 172(c)(3) emissions inventory requirement.

X. Proposed Actions on the Redesignation Request and Maintenance Plan SIP Revision Including Approval of the NO\textsubscript{X} MVEBs for 2011 and 2021 and the Direct PM\textsubscript{2.5} Insignificance Determination for the Hickory Area

EPA previously determined that the Hickory Area was attaining the 1997 PM\textsubscript{2.5} NAAQS on January 5, 2010, at 75 FR 230. EPA is now taking four separate but related actions regarding the Area’s redesignation and maintenance of the 1997 Annual PM\textsubscript{2.5} NAAQS. Three of the actions are discussed in this section and the fourth is discussed in the next section.

First, EPA is proposing to determine, based on complete, quality-assured and certified monitoring data for the 2007–2009 monitoring period, and after review of preliminary data in AQS for 2008–2010, that the Hickory Area continues to attain the 1997 Annual PM\textsubscript{2.5} NAAQS. Provided that EPA takes final action to approve the NCSSA and, under section 172(c)(3), the 2008 base emissions inventory, EPA is proposing to determine that the Hickory Area has met the criteria under CAA section 107(d)(3)(E) for redesignation from nonattainment to attainment for the 1997 Annual PM\textsubscript{2.5} NAAQS. On this basis, EPA is proposing to approve North Carolina’s redesignation request for the Hickory Area.

Second, EPA is proposing to approve North Carolina’s 2008 emissions inventory for the Hickory Area (under section CAA 172(c)(3)). North Carolina selected 2008 as the attainment emissions inventory year for the Hickory Area. This attainment inventory identifies a level of emissions in the Area that is sufficient to attain the 1997 Annual PM\textsubscript{2.5} NAAQS and also is a current, comprehensive inventory that meets the requirements of section 172(c)(3).

Third, subject to final approval of the NCSSA rules, EPA is proposing to approve North Carolina’s submitted maintenance plan for the Hickory Area, including the NO\textsubscript{X} MVEBs for 2011 and 2021 and the insignificance determination for the direct PM\textsubscript{2.5} contribution of motor vehicles to PM\textsubscript{2.5} pollution, as meeting the requirements of section 175A of the CAA. The maintenance plan demonstrates that the Area will continue to maintain the 1997 Annual PM\textsubscript{2.5} NAAQS, and the budgets meet all of the adequacy criteria contained in 40 CFR 93.118(e)(4) and (5). Further, as part of today’s action, EPA is describing the status of its adequacy determination for the NO\textsubscript{X}.

TABLE 6—HICKORY AREA 2008 EMISSIONS FOR PM\textsubscript{2.5}, NO\textsubscript{X}, AND SO\textsubscript{2} [tpy (percent total)]
MVEBs for 2011 and 2021 and the mobile source direct PM₂.₅ insufficiency determination for the PM₂.₅ NAAQS in accordance with 40 CFR 93.118(f)(1). On May 2, 2011, EPA published its adequacy notice in the Federal Register (76 FR 24472). Within 24 months from the effective date of EPA's adequacy determination, the transportation partners will need to demonstrate conformity to the new NOₓ MVEBs pursuant to 40 CFR 93.104(e) and will need to document the mobile source direct PM₂.₅ insufficiency determination for the PM₂.₅ NAAQS in future conformity determinations (76 FR 24475).

If finalized, approval of the redesignation request would change the official designation of Catawba County in the Hickory Area for the 1997 Annual PM₂.₅ NAAQS, found at 40 CFR part 81, from nonattainment to attainment. EPA is also proposing to approve into the North Carolina SIP the maintenance plan for the Hickory Area, the emissions inventory submitted with the maintenance plan, and the 2011 and 2021 MVEBs. EPA is proposing to take these actions if and when EPA finalizes, after notice and comment rulemaking, its approval of the NCSSA rules as a revision to the North Carolina SIP.

XI. Proposed Action on the Determination That the Hickory Area Has Attained the 1997 PM₂.₅ NAAQS by Its Applicable Attainment Date

The fourth action EPA is proposing today is to determine, based on quality-assured and certified monitoring data for the 2007–2009 monitoring period, that the Hickory Area attained the 1997 Annual PM₂.₅ NAAQS by its applicable attainment date of April 5, 2010. This determination is being proposed in accordance with section 179(c)(1) of the CAA and EPA regulations.

XII. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations.