

The EPA Administrator, Lisa P. Jackson, signed the following notice on 12/23/2011, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDSys website (<http://fdsys.gpo.gov/fdsys/search/home.action>) and on Regulations.gov (<http://www.regulations.gov>) in Docket No. EPA-HQ-OAR-2006-0790. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 51**

**[EPA-HQ-OAR-2011-0729; FRL - ]**

**RIN 2060-AR05**

**Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans**

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

**ACTION:** Proposed rule.

**SUMMARY:** The EPA is proposing revisions to rules that pertain to the regional haze program. In this action, the EPA is proposing that the trading program in the recently promulgated Transport Rule, also known as the Cross-State Air Pollution Rule, achieves greater reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas than source-specific Best Available Retrofit Technology (BART) in those states covered by the Transport Rule. In this action, the EPA is also proposing a limited disapproval of the regional haze State Implementation Plans (SIPs) that have been submitted by Alabama, Florida, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina and Texas. These states relied on

requirements of the Clean Air Interstate Rule (CAIR) to satisfy certain regional haze requirements. To address deficiencies in all of the CAIR-dependent regional haze SIPs, in this action, the EPA is proposing Federal Implementation Plans (FIPs) to replace reliance on the CAIR requirements in these SIPs with reliance on the Transport Rule as an alternative to BART. States are encouraged, at any time, to submit a revision to their regional haze SIP incorporating the requirements of the Transport Rule at which time we will withdraw the FIP being proposed in this action.

**DATES:** Comments. Comments must be received on or before **[INSERT DATE 45 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

Public Hearing. The public hearing will be held January 17, 2012.

Please refer to SUPPLEMENTARY INFORMATION for additional information on the comment period and the public hearing.

**ADDRESSES:** Comments. Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2011-0729, by one of the following methods:

- www.regulations.gov. Follow the online instructions for submitting comments. Attention Docket ID No. EPA-HQ-OAR-2011-0729.
- Email: a-and-r-docket@epa.gov. Attention Docket ID No. EPA-HQ-OAR-2011-0729.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2011-0729.

- Mail: EPA Docket Center, EPA West (Air Docket), Attention Docket ID No. EPA-HQ-OAR-2011-0729, U.S. Environmental Protection Agency, Mailcode: 2822T, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Please include a total of two copies.
- Hand Delivery: U.S. Environmental Protection Agency, EPA West (Air Docket), 1301 Constitution Avenue, Northwest, Room 3334, Washington, D.C. 20004, Attention Docket ID No. EPA-HQ-OAR-2011-0729. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2011-0729. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or email. The [www.regulations.gov](http://www.regulations.gov) website is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through [www.regulations.gov](http://www.regulations.gov), your email address will be automatically

captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, avoid any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at [www.epa.gov/epahome/dockets.htm](http://www.epa.gov/epahome/dockets.htm).

Docket. All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA West Building, Room 3334, 1301 Constitution Ave., NW, Washington, D.C. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

Public Hearing. The public hearing will be held on January 17, 2012, at the U.S. Environmental Protection Agency, 1<sup>st</sup> Floor, Building C, Room C111C, 109 T. W. Alexander Drive, Research Triangle Park, NC 27709. The public hearing will start at 10:00 a.m. and end at 3:00 p.m. or until the last registered speaker has spoken. Because this hearing is being held at U.S. government facilities, everyone planning to attend the hearing should be prepared to show valid picture identification to the security staff in order to gain access to the meeting room. In addition, you will need to obtain a property pass for any personal belongings you bring with you. Upon leaving the building, you will be required to return this property pass to the security desk. No large signs will be allowed in the building, cameras may only be used inside the classroom and outside of the building, and demonstrations will not be allowed on federal property for security reasons.

**FOR FURTHER INFORMATION CONTACT:** For technical information on this document, contact Ms. Martha Keating, Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail code C539-04, Research Triangle Park, NC 27711, telephone (919) 541-9407; fax number: 919-541-0824; email address: [keating.martha@epa.gov](mailto:keating.martha@epa.gov).

To register to speak at the hearing or attend the hearing on this document, contact Ms. Pamela Long, Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail code C504-

01, Research Triangle Park, NC 27711, telephone (919) 541-0641; fax number: 919-541-5509; email address: [long.pam@epa.gov](mailto:long.pam@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. General Information**

A. Does this action apply to me?

This proposed action does not directly regulate emission sources. It will affect state and local air pollution control agencies located within the geographic areas covered by the Transport Rule<sup>1</sup> and whose regional haze state implementation plan relied on CAIR<sup>2</sup> as an alternative to BART for sulfur dioxide (SO<sub>2</sub>) and/or Nitrogen Oxide (NO<sub>x</sub>) for electric generating units (EGUs) subject to BART requirements. Some of the EGUs located in such geographic areas may also be affected by the FIPs that may result from final rulemaking on this proposed action in that the final rule would allow states the option of not requiring them to meet source-specific BART emission limits to which they otherwise could be subject.

These sources are in the following groups:

Industry group	SIC <sup>a</sup>	NAICS <sup>b</sup>
Electric Services	492	221111, 221112, 221113, 221119,

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<sup>1</sup> See Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 76 FR 48208 (August 8, 2011).

<sup>2</sup> See Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO<sub>x</sub> SIP Call; Final Rule, 70 FR 25162 (May 12, 2005).

		221121, 221122
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<sup>a</sup> Standard Industrial Classification.

<sup>b</sup> North American Industry Classification System.

B. What should I consider as I prepare my comments for the EPA?

1. Submitting CBI. Do not submit this information to the EPA through [www.regulations.gov](http://www.regulations.gov) or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed to be CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2.

2. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions - The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

C. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this notice will be posted at <http://www.epa.gov/ttn/oarpg/new.html> under "Recent Actions."

D. What information should I know about a public hearing?

The hearing will be held on January 17, 2012, at the U.S. Environmental Protection Agency, 1<sup>st</sup> Floor, Building C, Room C111C, 109 T. W. Alexander Drive, Research Triangle Park, NC 27709. The public hearing will start at 10:00 a.m. and end at 3:00 p.m. or until



the last registered speaker has spoken. Because this hearing is being held at U.S. government facilities, everyone planning to attend the hearing should be prepared to show valid picture identification to the security staff in order to gain access to the meeting room. In addition, you will need to obtain a property pass for any personal belongings you bring with you. Upon leaving the building, you will be required to return this property pass to the security desk. No large signs will be allowed in the building, cameras may only be used inside the classroom and outside of the building, and demonstrations will not be allowed on federal property for security reasons. To register to speak at the hearing on this document, contact Ms. Pamela Long at (919) 541-0641 before 5 p.m. on January 13, 2012. For updates and additional information on a public hearing, please check the EPA's website at <http://www.epa.gov/ttn/oarpg/new.html> under "recent actions."

E. How is this notice organized?

The information presented in this notice is organized as follows:

- I. General Information
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- II. What action is the EPA proposing to take?
- III. What is the background for the EPA's proposed action?

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/23/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

- A. The Regional Haze Problem
- B. Clean Air Act Requirements for Addressing Regional Haze
- C. Alternative Measures In Lieu of BART
  - 1. Criteria for Comparing Visibility Progress of an Alternative Program to BART
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  - 3. Remand of CAIR and Implications for State Regional Haze Implementation Plans
  - 4. The Transport Rule and Regional Haze State Implementation Plans
- IV. Proposed Determination that the Transport Rule is an Approvable Alternative to BART
  - A. Application of the Two-Pronged Test
  - B. Identification of Affected Class I Areas
  - C. Scenarios Examined
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  - F. Proposed Amendment to the Regional Haze Rule
- V. Proposed Limited Disapproval of Certain States' Regional Haze SIPs
- VI. Proposed FIPs
- VII. Statutory and Executive Order Review
  - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
  - B. Paperwork Reduction Act
  - C. Regulatory Flexibility Act
  - D. Unfunded Mandates Reform Act
  - E. Executive Order 13132: Federalism
  - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
  - G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks
  - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
  - I. National Technology Transfer and Advancement Act
  - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

**II. What action is the EPA proposing to take?**

In this action, the EPA is proposing to find that the trading programs in the Transport Rule<sup>3</sup> achieve greater reasonable progress towards the national goal of achieving natural visibility conditions in mandatory Class I federal areas than source-specific BART in the states in which the Transport Rule applies. Specifically, we are proposing that the trading programs set out in the Transport Rule meet the requirements of an alternative program as prescribed in the Regional Haze Rule (RHR) at 40 CFR 51.308(e)(3) and are proposing to revise the regional haze regulations at 40 CFR 51.308(e)(4) accordingly to allow states to substitute participation in the trading programs under the Transport Rule for source-specific BART. In addition, we are also proposing to find that any approved SIPs revising or adopting the Transport Rule trading programs, which must control emissions at least as stringently as the Transport Rule FIPs, will also meet the requirements for an alternative to BART for EGUs for the pollutants which the Transport Rule limits in that state.

In this action, we are also proposing a limited disapproval of the regional haze SIPs that have been submitted by Alabama, Florida, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri,

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<sup>3</sup> See Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 76 FR 48208 (August 8, 2011), and Federal Implementation Plans for Iowa, Kansas, Michigan, Missouri, Oklahoma, and Wisconsin To Reduce Interstate Transport of Ozone finalized on December 15, 2011 for more details. For purposes of this proposed rule, the Transport Rule includes all of the states (28) included in the final Transport Rule and the supplemental rule.

North Carolina, Ohio, Pennsylvania, South Carolina and Texas. These states, fully consistent with the EPA's regulations at the time, relied on CAIR requirements to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals.<sup>4</sup> CAIR and the CAIR FIP requirements, however, will only remain in force to address emissions through the 2011 control period and thus CAIR cannot be relied upon in a SIP as a substitute for BART or as part of a long-term control strategy. The EPA has already proposed limited disapproval of certain other state regional haze SIPs that relied on CAIR.<sup>5</sup> We plan to take final action on both groups of SIPs when this action is finalized.

In this action we are also proposing FIPs for all the states for which we have previously proposed limited disapproval and for all the states for which we are proposing a limited disapproval of their regional haze SIP in this action due to the change in status of CAIR. Regional haze SIPs were due in December 2007. For a number of the states identified above, we made a finding on January 15, 2009, that the states had failed to timely submit a regional haze SIP. Most of these states have subsequently submitted SIPs, but we have not yet

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<sup>4</sup> The states for which we are proposing limited disapproval in this action are those that both relied on CAIR to satisfy BART requirements and are now covered by the requirements of the Transport Rule, for which we have not already made such a proposal.

<sup>5</sup> The states for which the EPA has previously proposed limited disapproval of regional haze SIPs because of reliance on CAIR are Kentucky, Tennessee, Virginia and West Virginia.

acted on them. Under the CAA, the EPA is required to promulgate a FIP within 2 years after finding that a state has failed to make a required submission or after disapproving a SIP in whole or in part, unless the state first adopts and we have fully approved a SIP. CAA § 110(c)(1). Given these CAA requirements and the fact that the Transport Rule has now replaced CAIR, we consider it appropriate at this time to issue FIPs to address the deficiencies in the regional haze SIPs related to the termination of CAIR. Our adoption of these FIPs at this time avoids the near-term need for additional administrative steps on the part of these states. The proposed regional haze FIPs also allow states the option of a less costly approach to meeting the regional haze requirements of the CAA since the proposed FIPs rely on the trading program already promulgated in the Transport Rule. We encourage states, at any time, to submit a revision to their regional haze SIP incorporating the requirements of the Transport Rule at which time we will withdraw the FIP we are proposing in this action. States may also include in such a SIP revision provisions applicable to specific EGU BART sources that they anticipate (or find after implementation of the Transport Rule) to continue to cause visibility impairment that the state wishes to reduce. However, we anticipate that some states may choose to remain subject to the proposed FIP and not submit a SIP revision. Our proposed finding that the Transport Rule makes greater reasonable progress than BART for EGUs in these states will hold true regardless

of whether a state chooses to submit a SIP revision under subpart 52.38 and 52.39 or remain subject to a FIP.

We are not proposing to disapprove the reasonable progress targets for 2018 that are an element of the long-term strategies for these states. The affected states originally set the reasonable progress goals in their SIPs based on the emission reductions expected to be achieved by CAIR, along with other emission reductions qualified for that purpose. The overall EGU emission reductions from the Transport Rule are larger than the EGU reductions achieved by CAIR and the substitution of the Transport Rule for CAIR does not weaken any affected state's long-term strategy. We intend to act on the reasonable progress goals and long-term strategies (including the Transport Rule) and other requirements of the RHR (monitoring, consultation with federal land managers, etc.) for each state in an individual notice at or after the time of the final rule for this action.

### **III. What is the background for the EPA's proposed action?**

#### **A. The Regional Haze Problem**

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particles (PM<sub>2.5</sub>) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), and their precursors (e.g., SO<sub>2</sub>, NO<sub>x</sub>, and in some cases, ammonia (NH<sub>3</sub>) and volatile organic compounds (VOC)). Fine particle precursors react in

the atmosphere to form fine particulate matter, which impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity and alters the color of scenes, and reduces the distance at which one can see a scene. PM<sub>2.5</sub> can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range<sup>6</sup> in many mandatory Class I federal areas<sup>7</sup> in the western United States is about 60 - 100 miles, or about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In most of the eastern Class I

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<sup>6</sup> Visual range is the greatest distance at which a dark object can be viewed against the sky.

<sup>7</sup> Areas designated as mandatory Class I federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I federal areas." Each mandatory Class I federal area is the responsibility of a "Federal Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area" in this action, we mean a "mandatory Class I federal area."

areas of the United States, the average visual range is less than 20 miles, or about one-fifth of the visual range that would exist under estimated natural conditions. 64 FR 35715 (July 1, 1999).

#### B. Clean Air Act Requirements for Addressing Regional Haze

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I federal areas which impairment results from manmade air pollution." On December 2, 1980, the EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, i.e., "reasonably attributable visibility impairment". 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. The EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. The EPA promulgated the RHR to address regional haze on July 1, 1999 (64 FR 35713). The RHR revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive



visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in the EPA's visibility protection regulations at 40 CFR 51.300-309. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia and the Virgin Islands. 40 CFR 51.308(b) requires states to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007.

Section 169A of the CAA and the EPA's implementing regulations require states to establish long-term strategies for making reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Implementation plans must also give specific attention to certain stationary sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources<sup>8</sup> built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology" as determined by the state. Under the RHR, states are directed to conduct BART determinations for such "BART-eligible" sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls,

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<sup>8</sup> The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7).

states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART, as described below.

### C. Alternative Measures In Lieu of BART

#### 1. Criteria for Comparing Visibility Progress of an Alternative Program to BART

Criteria for determining if an alternative measure achieves greater reasonable progress than source-specific BART are set out in the RHR at § 51.308(e)(3). The "better-than-BART" test may be satisfied as follows: If the distribution of emissions is not substantially different than under BART, and the alternative measure results in greater emission reductions, then the alternative measure may be deemed to achieve greater reasonable progress. If the distribution of emissions is significantly different, then states are directed to conduct an air quality modeling study to determine differences in visibility between BART and the alternative program for each impacted Class I area for the worst and best 20 percent of days.<sup>9</sup> The two-pronged visibility test would demonstrate "greater

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<sup>9</sup> While the RHR directs the state to conduct the air quality modeling study, as described in section III.C.2, the EPA itself conducted such a study for CAIR and through a notice-and-comment rulemaking codified the conclusion that the stated criteria were met by adding specific provisions allowing the use of CAIR in lieu of source-specific BART.

reasonable progress" under the alternative program if both of the following criteria are met:

- Visibility does not decline in any Class I area<sup>10</sup>, and
- There is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas.

The EPA's authority to establish non-BART alternatives has been judicially challenged and upheld twice, firmly establishing that the CAA allows states to substitute other programs for BART where the alternative achieves greater progress. In the first case, the court affirmed our interpretation of CAA 169A(b)(2) as allowing for alternatives to BART where those alternatives will result in greater reasonable progress than BART. Center for Energy and Economic Development v. EPA, 398 F.3d 653, 660 (D.C. Cir. 2005) ("CEED") (finding reasonable the EPA's interpretation of CAA section 169(a)(2) as requiring BART only as necessary to make reasonable progress). In the second case, Utility Air Regulatory Group v. EPA, 471 F.3d 1333 (D.C. Cir. 2006), the court found EPA's two-pronged visibility test to be a "reasonable notion of reasonable progress" and upheld our determination that states could rely on CAIR, as discussed below, as an alternative program to BART for EGUs in the CAIR-affected states.

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<sup>10</sup> As explained in section IV.A., the "decline" is relative to modeled future baseline visibility conditions in the absence of any BART or alternative program control requirements.

2. What is the relationship between BART and CAIR?

In May 2005, the EPA published CAIR, which required 28 states and the District of Columbia to reduce emissions of SO<sub>2</sub> and NO<sub>x</sub> that significantly contribute to, or interfere with maintenance of, the 1997 national ambient air quality standards (NAAQS) for fine particulates and/or ozone in any downwind state. The CAIR established emission budgets for SO<sub>2</sub> and NO<sub>x</sub> for states that contribute significantly to nonattainment in downwind states and required the significantly contributing states to submit SIP revisions that implemented these budgets. Because such SIP revisions were already overdue, CAIR also promulgated FIPs for the affected states establishing a cap-and-trade program for EGUs with opt-in provisions for other sources. States had the flexibility to subsequently adopt SIP revisions mirroring CAIR requirements or otherwise providing emission reductions sufficient to address interference with attainment or maintenance of the NAAQS in other states. Many affected states adopted CAIR-mirroring SIPs, while others chose to remain under CAIR FIPs.

As noted in Section III.C.1, the RHR allows states to implement an alternative program in lieu of BART so long as the alternative program has been demonstrated to achieve greater reasonable progress toward the national visibility goal than would BART. The EPA made just such a demonstration for CAIR in revisions to the regional haze program made in 2005. 70 FR 39104 (July 6, 2005). In those revisions,

we amended our regulations to provide that states participating in the CAIR cap-and-trade program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or states that remain subject to the CAIR FIP in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO<sub>2</sub> and NO<sub>x</sub>. 40 CFR 51.308(e)(4).

As a result of our determination that CAIR was “better-than-BART,” a number of states in the CAIR region, fully consistent with our regulations, designed their regional haze implementation plans to rely on the CAIR cap-and-trade program as an alternative to BART for EGU emissions of SO<sub>2</sub> and NO<sub>x</sub>. These states also relied on CAIR as an element of a long-term strategy for achieving their reasonable progress goals.

### 3. Remand of CAIR and Implications for State Regional Haze Implementation Plans

Following our determination in 2005 that CAIR was “better-than-BART” and the upholding of this determination by the court in 2006, the D.C. Circuit Court ruled on several petitions for review challenging CAIR on various grounds. As a result of this litigation, the D.C. Circuit Court remanded CAIR to the EPA, but later decided not to vacate the rule.<sup>11</sup> The court thereby left CAIR and CAIR SIPs and FIPs in place in order to “temporarily preserve the environmental

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<sup>11</sup> See North Carolina v. EPA, 531 F.3d 896; modified by 550 F.3d 1176 (D.C. Cir. 2008).

values covered by CAIR” until the EPA replaced it with a rule consistent with the court's opinion. 550 F.3d at 1178. The EPA replaced CAIR with the Transport Rule on August 8, 2011.<sup>12</sup> The Transport Rule will take effect on January 1, 2012. The CAIR and the CAIR FIPs will remain in place to address emissions through the end of the 2011 control periods.

Many states relied on CAIR as an alternative to BART for SO<sub>2</sub> and NO<sub>x</sub> for subject EGUs, as allowed under the BART provisions at 40 CFR 51.308(e)(4). These states also relied on the improvement in visibility expected to result from controls planned or already installed on sources in order to meet CAIR provisions in developing their long-term visibility strategy. In addition, many states relied upon their own CAIR SIPs or the CAIR FIPs for their states as legal justification for these planned controls and consequently did not include separate enforceable measures in their long-term strategies (a required element of a regional haze SIP submission) to ensure these EGU reductions. These states also submitted demonstrations showing that no additional controls on EGUs beyond CAIR would be reasonable for the first 10-year implementation period of the regional haze program.

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<sup>12</sup> See Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone 76 FR 48208 (August 8, 2011).

Since states in the CAIR-affected region have based a number of required elements of their regional haze programs on CAIR, which has now been replaced by the Transport Rule, we cannot fully approve regional haze SIP revisions that have relied on CAIR for emission reduction measures. To date, we have proposed limited disapprovals for some states whose regional haze SIP revisions rely on CAIR (for example, for the State of Tennessee, 76 FR 33662 (June 9, 2011)). We intend to take final action on those proposed limited disapprovals of SIPs when this action is finalized. However, there are other states whose regional haze SIP relied on CAIR but for which the EPA has not yet proposed to take action. In this action we are proposing a limited disapproval of the regional haze SIPs that have been submitted by Alabama, Florida, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina and Texas. These states relied on CAIR requirements to satisfy both the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals, and they are now covered by the Transport Rule requirements.

4. The Transport Rule and Regional Haze State Implementation Plans

The Transport Rule sunsets CAIR and the CAIR FIPs for control periods in 2012 and beyond. The Transport Rule requires 28 states in the eastern half of the United States to significantly improve air quality by reducing EGU SO<sub>2</sub> and NO<sub>x</sub> emissions that cross state lines

and contribute to ground-level ozone and/or fine particle pollution in other states. The rule allows air-quality-assured allowance trading among covered sources, utilizing an allowance market infrastructure modeled after existing allowance trading programs. The Transport Rule allows sources to trade emissions allowances with other sources in the same or different states, while firmly constraining any emissions shifting that may occur by establishing an emission ceiling for each state.

In developing the Transport Rule, we did not conduct any technical analysis to determine whether compliance with the Transport Rule would satisfy regional haze BART-related requirements. Accordingly, in the final Transport Rule, the EPA did not make a determination or establish any presumption that compliance with the Transport Rule would satisfy BART-related requirements for EGUs. We have now completed such a technical analysis and it is the basis of this action in which we are proposing to find that in affected mandatory Class I federal areas, the Transport Rule achieves greater reasonable progress towards the national goal of achieving natural visibility conditions than source-specific BART. Specifically, we are proposing that participation by EGUs in the Transport Rule trading program set out in 40 CFR part 97 subparts AAAAAA-DDDDD meets the requirements of an alternative program as prescribed in the RHR at § 51.308(e)(3), and we are proposing to revise the regional haze



regulations at 40 CFR 51.308(e)(4) accordingly. The EPA invites comments on these proposed revisions.

The proposed determination in this action that participation in the Transport Rule trading program may substitute for BART applies only to EGUs in the states in the Transport Rule region and only to the pollutants subject to the requirements of the Transport Rule (i.e., SO<sub>2</sub> and/or NO<sub>x</sub>). BART for emissions of other visibility impairing pollutants (e.g., primary PM<sub>2.5</sub>, NH<sub>3</sub> or VOC) must still be evaluated according to the RHR Guidelines. Non-EGU sources also remain subject to requirements of the RHR.

Under the proposed revision to this section, a state in the Transport Rule region whose EGUs are subject to the requirements of the Transport Rule trading program only for annual NO<sub>x</sub> or ozone season NO<sub>x</sub> would be allowed to rely on our proposed determination that the Transport Rule makes greater reasonable progress than source-specific BART for NO<sub>x</sub>. Such a state would still need to address BART for SO<sub>2</sub> and other visibility impairing pollutants.

In this action we are also proposing a FIP for those Transport Rule states for which we already have or now are proposing a limited disapproval due to the termination of CAIR. For these states, the proposed FIP would replace reliance on the CAIR requirements with reliance on the Transport Rule as an alternative to BART for SO<sub>2</sub> and NO<sub>x</sub> emissions from EGUs and as a long-term strategy measure.

We are proposing to leave unchanged the final sentence of section 51.308(e)(4) in the regional haze regulations. This language allows a state to address BART, when it is required based on reasonable attribution of visibility impairment at a Class I area to a particular source by a federal land management agency, by including a geographic enhancement in its SIP.<sup>13</sup> For example, a geographic enhancement in the form of adjusted allocations at a BART-subject source might take the place of source-specific emission rate limits. Use of a geographic enhancement in the context of reasonable attribution of visibility impairment at a Class I area will be addressed in separate EPA or state actions on a case-by-case basis in accordance with 40 CFR 51.302.

#### **IV. Proposed Determination that the Transport Rule is an Approvable Alternative to BART**

##### A. Application of the Two-Pronged Test

As described in section III.C.1, the two-pronged test for determining if an alternative program achieves greater reasonable

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<sup>13</sup> Under section 51.302, the affected federal land manager may certify that there exists reasonably attributable visibility impairment (RAVI) in a mandatory Class I federal area. This certification is an extraordinary measure to address localized impacts due to a specific source or sources. The EPA and federal land managers will work together regarding the review of SIPs (or the development of FIPs) to respond to a RAVI certification when one is made, within the better-than-BART construct for regional haze and in accordance with section 51.302 and section 51.308(e)(4). States may also include in their SIPs provisions applicable to a specific source even if no federal land management agency has made such a reasonable attribution.

progress than source-specific BART is set out in the RHR at 40 CFR 51.308(e)(3). The underlying purpose of both prongs of the test is to assess whether visibility conditions at Class I areas would be better with the alternative program in place than they would without it. The first prong ensures that the alternative program will not cause a decline in visibility at any affected Class I area. It addresses the possibility that the alternative program might cause local changes in emissions that could result in localized visibility degradation. The second prong ensures that the program results in improvements in average visibility across all affected Class I areas as compared to adopting source-specific BART. Together, these tests ensure that the alternative program provides for greater reasonable progress than would source-specific BART.

In the case of the Transport Rule as an alternative to source-specific BART, the logical reference point for the first prong is visibility conditions as they are expected to be at the time the Transport Rule is implemented but in the absence of BART. This ensures that the predicted visibility differences are due to the Transport Rule alternative and not to other extrinsic factors. For example, if large increases in wildfires are expected, due to accumulation of fuel from past forest management practices, a degradation of visibility from current conditions may be expected. It would be irrational to disapprove an alternative program as not meeting the first prong of the test because of a modeled degradation

from current conditions, where that degradation is actually anticipated because of smoke from wildfires – sources which are not subject to the CAA BART provisions. By comparing the Transport Rule alternative to future projected baseline conditions without any BART program, such extrinsic variables are accounted for. The future projected baseline also accounts for other non-Transport Rule constraints on EGU emissions including the Acid Rain Program, the NOx SIP Call, New Source Performance Standards, Title V permits, any state laws and consent order requiring emission reductions, and any other permanent and enforceable binding reduction commitments. We are thus able to ascertain (to the extent possible where future projections are concerned) whether visibility under the alternative would decline at any affected Class I area, all other things being equal. Therefore, in applying the first prong of the test to the Transport Rule, we used a future (2014) projected baseline.<sup>14</sup> Similarly, in applying the second prong of the test, we assumed identical future conditions (the same as in the future 2014 baseline case) for non-EGU sources for both the source-specific BART scenario and the Transport Rule scenario.

To satisfy each prong of the test, we examined visibility differences on both the worst and best 20 percent of days. Thus,

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<sup>14</sup> The 2014 baseline modeling for this analysis is identical to the Transport Rule 2014 baseline. The 2014 baseline does not include the Transport Rule, BART, or CAIR control programs.

under the first prong, visibility must not decline at any affected Class I area on either the best 20 percent or the worst 20 percent days as a result of implementing the Transport Rule. In addition, under the second prong, the 20 percent best and 20 percent worst days should be considered in determining whether the Transport Rule produces greater average improvement than source-specific BART over all affected Class I areas.

#### B. Identification of Affected Class I Areas

In applying the two-pronged test to the Transport Rule, we first identified the Class I areas in the 48 contiguous states with sufficiently complete monitoring data available to support the analysis.<sup>15</sup> There were 140 such Class I areas represented by 96 IMPROVE monitors; nine Class I areas were excluded that did not have sufficient historical ambient data from the IMPROVE monitoring

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<sup>15</sup> The modeling used a 2005 base case projected to a 2014 future year. The modeling days for the analysis were based on the observed 20 percent best and 20 percent worst days from 2005 at each IMPROVE site. Therefore, the analysis could not be completed for IMPROVE sites that did not have complete ambient data for 2005.

program to support the technical analysis.<sup>16</sup> After identifying these areas we then considered two possible approaches we could use to identify which of these areas are "affected" Class I areas in terms of the potential effect of the Transport Rule as an alternative control program to source-specific BART. In the first approach, we identified as affected Class I areas 60 mandatory Class I federal areas represented by 46 IMPROVE monitors located in 37 complete states and four partial states that are contained in the eastern portion of the Transport Rule modeling domain.<sup>17</sup> The second approach we considered was a national approach in which visibility impacts on 140 Class I areas across the 48 contiguous states were evaluated.

In the Transport Rule, the determination of states that contribute significantly to downwind nonattainment and/or maintenance focused on the 37 states that are fully contained in this eastern modeling domain. The eastern modeling domain also includes large parts of Montana, Wyoming, Colorado, and New Mexico. In the Transport

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<sup>16</sup> In the Regional Haze Program, there are 110 ambient monitoring sites which represent 155 Class I areas. Therefore, some monitors represent air quality at more than one Class I area. See Guidance for Tracking Progress under the Regional Haze Rule, U.S. EPA, EPA-454/B-03-004, September 2003, which is found at: [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_tpurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf). In our analysis we calculated visibility changes at each individual Class I area. Therefore, some IMPROVE monitors are counted more than once in the averaging of the visibility data. This does not affect the proposed finding that the Transport Rule is better than source-specific BART.

<sup>17</sup> The "eastern" Transport Rule modeling grid used a horizontal resolution of 12 kilometers (km).

Rule, EPA did not determine that Montana, Wyoming, Colorado, New Mexico or the six New England states were contributing to violations of the 1997 ozone NAAQS or the 1997 and 2006 PM<sub>2.5</sub> NAAQS, or interfering with maintenance in downwind states and therefore they are not included in the Transport Rule program.<sup>18</sup> However, we included Class I areas located in these non-Transport Rule states and partial states in the first approach for identifying "affected areas". It is conceivable that because of proximity, emissions from the Transport Rule states could impact any of the Class I areas in the eastern Transport Rule modeling domain. Specifically, in this first approach for identifying "affected areas" in the Transport Rule region, we examined impacts on 27 Class I areas located within the Transport Rule states and 33 additional Class I areas located in non-Transport Rule states but within the eastern Transport Rule modeling domain, for a total of 60 Class I areas.

The eastern Transport Rule modeling domain lies within a larger modeling domain which covers the lower 48 states and adjacent portions of Canada and Mexico. In the Transport Rule, the results obtained with this national domain were used to calculate boundary conditions for the eastern Transport Rule region. The EPA did not use

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<sup>18</sup> The Transport Rule determined that the six New England states did not contribute to nonattainment or interfere with maintenance in downwind states. The Transport Rule did not make a determination whether Montana, Wyoming, Colorado, and New Mexico contribute to nonattainment or interfere with maintenance in neighboring states.

the national domain to investigate interstate contributions to nonattainment or interference with maintenance, in part because the air quality model structure for the national domain is less suitable for that type of use.<sup>19</sup> In the second approach to identifying which areas are "affected" Class I areas, we used data from the larger domain to estimate potential visibility impacts on Class I areas located to the west of the Transport Rule modeling region boundary. The additional 80 Class I areas under this national approach are in states or part of states that were not part of the eastern modeling domain for the Transport Rule, but were part of the western modeling domain.<sup>20</sup> In this approach, the eastern domain 12 km modeling results were used to calculate visibility changes in the 60 eastern Class I areas and the national domain 36 km modeling results were used to calculate visibility changes in the 80 western Class I areas. Consideration of this national region would encompass the possibility that the Transport Rule might have the effect of increasing EGU emissions in the most western portion of the United States due to shifts in electricity generation or other market effects. In total,

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<sup>19</sup> The eastern modeling domain used a 12 km grid size, while the national modeling domain used a 36 km grid size. See Air Quality Modeling Final Rule Technical Support Document, U.S. EPA, June 2011, which is found at: <http://www.epa.gov/airtransport/pdfs/AQModeling.pdf>.

<sup>20</sup> See Air Quality Modeling Final Rule Technical Support Document, U.S. EPA, June 2011, which is found at: <http://www.epa.gov/airtransport/pdfs/AQModeling.pdf>.



the national domain includes 140 Class I areas (including the 60 contained within the Transport Rule region).

We request comment on whether the "affected Class I areas" should be considered to be the 60 Class I areas located in the Transport Rule eastern modeling domain, the larger set of 140 Class I areas in the larger national domain, or some other set. We note that given the modeling results presented in section VI.E, the choice between the 60 Class I areas or the 140 Class I areas does not affect our proposed conclusion that both prongs of the two-prong test are met.

#### C. Scenarios Examined

The Transport Rule requires 28 states in the eastern half of the United States to reduce EGU SO<sub>2</sub> and NO<sub>x</sub> emissions that cross state lines and contribute to ground-level ozone and fine particle pollution in other states. BART, on the other hand, is applicable nationwide and covers 26 industrial categories, including EGUs, of a certain vintage. In our comparison, we sought to determine whether the Transport Rule cap-and-trade program for EGUs will achieve greater reasonable progress than would BART for EGUs only. Therefore, we examined two relevant control scenarios. The first control scenario examined SO<sub>2</sub> and NO<sub>x</sub> emissions from all EGUs nationwide after the application of BART controls to all BART-eligible EGUs ("Nationwide BART"). In the second scenario, EGU SO<sub>2</sub> and NO<sub>x</sub> emissions reductions attributable to the Transport Rule were applied in the

Transport Rule region and BART controls were applied to all BART-eligible EGUS outside the Transport Rule region ("Transport Rule + BART-elsewhere"). The latter scenario reflects the fact that source-specific BART would remain a regional haze SIP element outside the Transport Rule region. In order to more accurately project the Transport Rule emissions, it is necessary to assume EGU BART controls outside the Transport Rule region to account for potential load and emission shifting among EGUs.

For both the "Nationwide BART" scenario and the "Transport Rule + BART-elsewhere" scenario, we modeled the presumptive EGU BART limits for SO<sub>2</sub> and NO<sub>x</sub> emission rates as specified in the BART Guidelines (Guidelines for BART Determinations Under the Regional Haze Rule, 70 FR 39104, July 6, 2005), unless an actual emission rate at a given unit with existing controls is lower. In the latter case, we modeled the lower emission rates. In addition, we modeled the impacts of BART using stringent assumptions regarding the EGUs (or specific units at EGUs) that would be subject to BART. Specifically, we assumed that all BART-eligible EGUs were actually subject to BART requirements. We also assumed that presumptive BART limits would be applied to much smaller units. In this analysis we assumed the threshold for BART-eligibility was 100 megawatts (MW) for SO<sub>2</sub> and 25 MW for NO<sub>x</sub> and did not eliminate any sources based on their annual total emissions. (By comparison, the RHR BART Guidelines only apply presumptive limits to EGUs having a total generating capacity of 750

MW and exempt BART-eligible units with the potential to emit less than 40 tons per year of either SO<sub>2</sub> or NO<sub>x</sub>.)

The RHR BART Guidelines specify presumptive SO<sub>2</sub> BART limits for an EGU with an existing scrubber as 95 percent scrubber control efficiency or 0.15 pounds per million Btu (lbs/MMBtu). We used the National Electric Energy Data System (NEEDS), an EPA database of existing and planned-committed EGUs, to identify which BART-eligible units have existing scrubbers.<sup>21</sup> The NEEDS also contains information on scrubber efficiency and emission rates. For scrubbed BART-eligible units, we based our BART emission rate on a comparison of the emission rate listed for that unit in NEEDS to the presumptive SO<sub>2</sub> emission rate. That is, if the unit has at least a 95 percent efficient scrubber, the emission rate being achieved at that control efficiency was modeled for that unit even if the emission rate was higher than 0.15 lbs/MMBtu. Conversely, if an emission rate of 0.15 lbs/MMBtu or lower is being achieved, we modeled that emission rate for the unit, even if the scrubber is less than 95 percent efficient. For BART-eligible units without existing scrubbers, we modeled an emission rate that reflected 95 percent control based on a new installation of a highly efficient scrubber.

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<sup>21</sup>See The NEEDS User Guide: [http://www.epa.gov/airmarkets/progsregs/epa-ipm/CSAPR/docs/Guide to NEEDSv410.pdf](http://www.epa.gov/airmarkets/progsregs/epa-ipm/CSAPR/docs/Guide%20to%20NEEDSv410.pdf) which is found at <http://www.epa.gov/airmarkets/progsregs/epa-ipm/transport.html>.

The RHR BART Guidelines specify presumptive limits for NO<sub>x</sub> based on coal type and boiler configuration. The BART guidelines also specify that existing NO<sub>x</sub> controls must be operated year round. For the source-specific "Nationwide BART" scenario and for the "elsewhere" EGUs in the "Transport Rule + BART-elsewhere" scenario, we assumed that any BART-subject unit with existing NO<sub>x</sub> controls in the future baseline case would retain at least those controls and would be required to operate them year round. If the existing NO<sub>x</sub> controls in the future baseline case did not meet the presumptive BART limits (with the modifications about applicability as described above), we assumed installation of post-combustion controls that would meet the BART guidelines with year round operation. In the "Transport Rule + BART-elsewhere" scenario, there are 5 states that are subject to the Transport Rule requirements during the ozone season only.<sup>22</sup> For these states, NO<sub>x</sub> controls were assumed to operate only during ozone season as required by the Transport Rule. The RHR BART Guidelines also specify presumptive limits for NO<sub>x</sub> based on coal type and boiler configuration. Table 1 summarizes the NO<sub>x</sub> emission limits we applied to BART-eligible units of 25 MW or greater. For units firing a coal blend, which the BART Guidelines do not address,

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<sup>22</sup> States subject to the Transport Rule requirements during the ozone season only are Oklahoma, Arkansas, Louisiana, Mississippi and Florida.

we calculated a weighted presumptive NO<sub>x</sub> limit based on the percentage of each coal type fired.

**Table 1. BART Presumptive NO<sub>x</sub> Limits by Boiler Configuration and Coal Type (lbs/MMBtu)**

	<b>Bituminous</b>	<b>Subbituminous</b>	<b>Lignite</b>
Dry bottom wall-fired	0.39	0.23	0.29
Tangential-fired	0.28	0.15	0.17
Cell burners	0.40	0.45	Not applicable
Dry turbo-fired	0.32	0.23	Not applicable
Wet bottom tangential-fired	0.62	Not applicable	Not applicable
Cyclone	0.10	0.10	0.10

Certain EGUs in the analysis were constrained by emission limits other than presumptive limits due to a proposed or final regional haze SIP, a proposed or final regional haze FIP, a final consent decree, or state rules. These units and their emission limits are detailed in the Technical Support Document (TSD) for this proposed rule. (See Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, Docket EPA-HQ-OAR-2011-0729.)

D. Emission Projections

To estimate emissions expected from the scenarios described in section IV.C, we used the Integrated Planning Model (IPM). The IPM is a multi-regional, dynamic, deterministic linear programming model of the electric power sector. It is used extensively by the EPA to support regulatory activities. The IPM provides forecasts of least-cost capacity expansion, electricity dispatch, and emission control strategies for meeting electricity demand subject to environmental, transmission, dispatch, and reliability constraints. The IPM was used

in this case to evaluate the emissions impacts of the described scenarios limiting the emissions of SO<sub>2</sub> and NO<sub>x</sub> from EGUs. This analysis used the most recently updated IPM platform which is documented at <http://www.epa.gov/crossstaterule/>.<sup>23</sup> Table 2 presents the annual emissions for each policy scenario as projected by the IPM. As shown by the numbers in the far right column, "Transport Rule + BART-elsewhere" achieved greater emission reductions nationwide<sup>24</sup> for both pollutants than source-specific "Nationwide BART" alone.

**Table 2. EGU SO<sub>2</sub> and NO<sub>x</sub> Annual Emissions as Projected by IPM  
(In thousands of tons per year)**

	2014 Base Case EGU Emissions	2014 "Nationwide BART"	2014 "Transport Rule + BART-elsewhere"	Additional reduction from "Transport Rule + BART-elsewhere" ("Nationwide BART" minus "Transport Rule + BART-elsewhere")
Nationwide SO <sub>2</sub>	7,160	3,820	2,918	902
Nationwide NO <sub>x</sub>	1,946	1,798	1,756	42

The IPM projections of NO<sub>x</sub> and SO<sub>2</sub> emissions from EGUs for the "Transport Rule + BART-elsewhere" control scenario summarized on an annual basis in Table 2, which were used to arrive at the modeling

<sup>23</sup> Extensive documentation of the IPM platform may be found at <http://www.epa.gov/airmarkets/progsregs/epa-ipm/transport.html>.

<sup>24</sup> In the context of this action, when we refer to nationwide emissions or a nationwide analysis, we are referring to the contiguous 48 states.

results presented in section VI.E, are based on the state budgets prescribed in the final Transport Rule published on August 8, 2011, and the supplemental proposal finalized on December 15, 2011.<sup>25</sup> On October 14, 2011, the EPA issued a proposed notice that would increase NO<sub>x</sub> and SO<sub>2</sub> budgets for certain states in accordance with revisions to certain unit-level input data. 76 FR 63860. Even if these proposed increases to state budgets are finalized, emissions of both NO<sub>x</sub> and SO<sub>2</sub> in the Transport Rule states in the "Transport Rule + BART-elsewhere" control scenario will still be substantially below emissions in the "Base Case" scenario. Therefore, we believe that the modeling results in section VI.E comparing these two scenarios based on the emissions from the final Transport Rule, showing that the first prong of the better-than-BART test is satisfied, are also sufficient for determining that the Transport Rule as modified by the proposed increases in the state budgets also would meet the first prong.

Also, even if the proposed increases to state budgets are finalized, the "Transport Rule + BART-elsewhere" control scenario is still projected to result in about 26,000 tons more NO<sub>x</sub> emission

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<sup>25</sup> See Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone 76 FR 48208 (August 8, 2011). The ozone season state budgets for the states affected by the supplemental proposal finalized on December 15, 2011, are included in the "Transport Rule + BART-elsewhere" control scenario. (The ozone season budget for Kansas was not finalized on December 15, 2011.)

reductions than "Nationwide BART" and about 821,000 tons more SO<sub>2</sub> emission reductions than "Nationwide BART." We believe the changes in the emissions differences between these two scenarios that would result if the proposed increases in state budgets are finalized are unlikely to affect the determination of whether "Transport Rule + BART-elsewhere" provides greater visibility improvement than "Nationwide BART" averaged across all affected Class I areas, as assessed by the second prong of two-pronged test. A sensitivity analysis that examines the impact of the proposed state budget increases on visibility improvement is presented in Appendix C of the TSD. We request comment on this aspect of our proposed determination.

#### E. Air Quality Modeling Results

To assess the air quality metrics that are part of the two-pronged test, we used the IPM emission projections summarized in Table 2 as inputs to an air quality model to determine the impact of "Transport Rule + BART-elsewhere" and "Nationwide BART" controls on visibility in the affected Class I areas. To project air quality impacts we used the Comprehensive Air Quality Model with Extension (CAMx) version 5.3. The air quality modeling analysis and related analyses to project visibility improvement are described in more detail in the TSD for the Transport Rule.<sup>26</sup> The base year meteorology

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<sup>26</sup> See Air Quality Modeling Final Rule Technical Support Document, U.S. EPA, June 2011, which is found at: <http://www.epa.gov/airtransport/pdfs/AQModeling.pdf>.



used in the CAMx modeling was 2005. The base year IMPROVE ambient monitoring data for the years 2003-2007 were used to project visibility to 2014 and to compare the visibility improvements from the two control scenarios. The 2003-2007 IMPROVE data were used because these are the 5 years of data which straddle the base 2005 modeling year. The post-processing calculations for visibility are consistent with the RHR tracking progress guidance<sup>27</sup> and the regional haze air quality modeling guidance.<sup>28</sup> The visibility projections for each Class I area are presented in the air quality modeling TSD.<sup>29</sup>

The cornerstone of our modeling process was the 2014 "Base Case" modeling scenario, which contains emissions for 2014 based on predicted growth and existing emissions controls. We used model-predicted changes in visibility impairment along with the observed base year visibility values to estimate future visibility impairment at each Class I area. We applied the relative predicted change in visibility (expressed as a percent) from the model, due to emissions changes, to the base year visibility values to estimate future

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<sup>27</sup> See Guidance for Tracking Progress Under the Regional Haze Rule, U.S. EPA, EPA-454/B-03-004, September 2003, which is found at: [http://www.epa.gov/ttncaaal/t1/memoranda/rh\\_tpurhr\\_gd.pdf](http://www.epa.gov/ttncaaal/t1/memoranda/rh_tpurhr_gd.pdf).

<sup>28</sup> See Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM<sub>2.5</sub>, and Regional Haze, U.S. EPA, EPA-454/B-07-002, April 2007, which is found at: <http://www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf>.

<sup>29</sup> See Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, Docket EPA-HQ-OAR-2011-0729.

visibility. The projected visibility values were based on emissions changes between the 2005 base year inventory and the 2014 inventory. After we established the future year 2014 "Base Case" visibility values, we calculated estimated visibility improvements at each Class I area by modeling the "Transport Rule + BART-elsewhere" control strategy as well as the "Nationwide BART" strategy in 2014.

We did two separate analyses to assess the potential visibility impacts of "Transport Rule + BART-elsewhere" and "Nationwide BART" controls on 60 Class I areas in the Transport Rule region and on 140 Class I areas in the contiguous 48 states (referred to as the national region). For both visibility scenarios we quantified the visibility impacts on the 20 percent best and 20 percent worst visibility days for the 2014 future-year base case, the "Transport Rule + BART-elsewhere" scenario, and the "Nationwide BART" control scenario.

Under the first prong of the test, visibility cannot degrade at any affected Class I area. To determine if "Transport Rule + BART-elsewhere" resulted in degradation of visibility at any affected Class I area, we compared the visibility impacts of "Transport Rule + BART-elsewhere" to base case 2014 visibility conditions. As described in detail in the TSD for this action, the "Transport Rule + BART-elsewhere" alternative passed this first prong in the Transport Rule region by not causing visibility degradation at any of the 60 affected Class I areas in the eastern Transport Rule modeling domain

(i.e., when using the first approach to identifying affected areas), on either the 20 percent best or the 20 percent worst days. In the national region (i.e., when using the second approach to identifying affected areas), the "Transport Rule + BART-elsewhere" alternative was also predicted to not cause visibility degradation at any affected Class I area on either the 20 percent best or the 20 percent worst days, with a few exceptions. The exceptions were predicted average degradations of 0.23, 0.23, and 0.26 deciviews, respectively, at Pine Mountain Wilderness, Arizona, Mazatzal Wilderness, Arizona, and Saguaro National Park, Arizona, on the 20 percent worst days.<sup>30</sup> There was also a predicted degradation of 0.05 deciviews on the 20 percent best days at Bryce Canyon National Park in Utah.<sup>31</sup> While not part of the two-pronged test, we also compared the baseline scenario to the "Nationwide BART" scenario. The analysis of the national region under the "Nationwide BART" control scenario projected a degradation of 0.23 deciviews on the 20 percent worst days at Pine Mountain Wilderness and Mazatzal Wilderness (the same as the "Transport Rule + BART-elsewhere" result just noted).

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<sup>30</sup> The results for Pine Mountain and Mazatzal were the same because they are both represented by the same IMPROVE monitoring site (Ike's Backbone, IKBA).

<sup>31</sup> Changes in visibility were rounded to the nearest 0.1 deciviews. Therefore, any changes that were less than 0.05 were rounded down and treated as zero. Any changes that were 0.05 or greater were rounded up and treated as potential degradation.

The fact that unexpected degradations at some western Class I areas were predicted for the "Nationwide BART" scenario as well as the "Transport Rule + BART-elsewhere" scenario led us to investigate the CAMx modeling output in more detail.<sup>32</sup> Based on that investigation, we consider the visibility projections for the western portion of the national modeling domain that indicate potential degradation in four western Class I areas under the "Transport Rule + BART-elsewhere" scenario compared to the "Base Case" scenario to be anomalous results that do not indicate the true effects that the "Transport Rule + BART-elsewhere" scenario (or the "Nationwide BART" scenario) will have on visibility in these areas.

In the CAMx output for 36 km grid cells in the vicinity of these four Class I areas, we observed that modeled concentrations of nitrate were very low on the 20 percent worst days (and 20 percent best days at Bryce Canyon) in both the "Transport Rule + BART-elsewhere" case and the "Nationwide BART" case. The modeled nitrate concentrations in these cases ranged from 0.001 to 0.004 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), averaged across the 20 percent worst or best days in 2005. Notably, the modeled concentrations were generally a small fraction of monitored ambient nitrate concentrations at the IMPROVE sites for the four Class I areas. In the cases where degradation was calculated, a very small increase in modeled nitrate

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<sup>32</sup> Appendix B of the TSD in the docket for this action provides more information on this aspect of the CAMx modeling results.

was observed on several of the worst or best modeled days. This lead to a relatively large modeled percent increase in nitrate. As an example, on the worst days at Pine Mountain and Mazatzal, the modeled nitrate concentration increased from 0.001  $\mu\text{g}/\text{m}^3$  in the 2014 base case to 0.002  $\mu\text{g}/\text{m}^3$  in the "Transport Rule + BART-elsewhere" case.

Further examination of the days when these nitrate increases occur reveals a somewhat random pattern of very small increases and decreases that appear unrelated to EGU emissions changes. While IPM predicts modestly higher  $\text{NO}_x$  emissions in some nearby states under the "Transport Rule + BART-elsewhere" scenario, the checkerboard pattern of nitrate differences in Arizona and southern Utah show no logical connection to these modestly higher emissions. This nitrate modeling issue appears similar to a previously noted nitrate chemistry stability issue when modeled concentrations are very small and relative humidity is very low.<sup>33</sup> Thus, we conclude that these positive and negative differences between very low nitrate concentrations are a modeling artifact attributable to the nitrate physics in CAMx for the conditions that apply in this geographic area on these days, and are not reasonable predictors of the true relative effects on visibility of the emission control scenarios.

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<sup>33</sup> Appendix B of the TSD in the docket for this action provides more information on this issue.

To illustrate how sensitive the predictions of degradation are to highly variable results on particular days, if the one day of the 20 percent worst or best days with the largest increase in modeled nitrate concentration at each site is removed from consideration for that site, the apparent degradations no longer occur. We also note that although the increases in modeled nitrate concentrations are very small (ranging between 0.01 and 0.04  $\mu\text{g}/\text{m}^3$  for the one day at each site just mentioned), the "relative response factor" method we used to combine CAMx output (representing future conditions) with IMPROVE monitoring data (representing historical conditions) greatly magnified these small increases in nitrate concentrations. The small increases in modeled nitrate are converted to relatively large percent increases in nitrate and then multiplied by actual ambient nitrate concentrations in the base period that are far higher than the concentrations predicted by CAMx. Thus, very small differences in concentrations of nitrate in the CAMx output that would have had no effect on calculated deciview values if used directly, nevertheless result in apparent degradations on the order of 0.1 to 0.26 deciviews after being combined with IMPROVE data. The EPA is investigating possible modifications to the software used to post-process CAMx output. These possible revisions are aimed at avoiding potentially misleading results in situations such as the one observed near these western Class I areas. We seek comment on an alternate methodology

described in Appendix B of the TSD that attempts to address the effects of very low nitrate concentrations on visibility results.

After considering the results of the first prong of the visibility test and examining the CAMx output in more detail as described above, we are confident that no degradation in the four western Class I areas will result from implementation of the Transport Rule trading programs in the eastern U.S. Consequently, we are proposing that the "Transport Rule + BART-elsewhere" control scenario passes the first prong of the visibility test considering affected Class I areas located in both the Transport Rule region (first approach) and the national region (second approach). Details on the individual Class I area calculations can be found in the air quality modeling TSD.

The second prong of the test assesses whether the "Transport Rule + BART-elsewhere" scenario results in greater average visibility improvement at affected Class I areas compared to the "Nationwide BART" scenario. To determine if "Transport Rule + BART-elsewhere" achieved greater average visibility improvement, we compared the visibility impacts of "Transport Rule + BART-elsewhere" at the Class I areas to visibility impacts predicted at these same areas after implementation of "Nationwide BART". In the Transport Rule region (first approach) and the national region (second approach), the average visibility improvement of the "Transport Rule + BART-elsewhere" alternative was greater than "Nationwide BART" on both the

20 percent best and 20 percent worst days. Thus, the "Transport Rule + BART-elsewhere" alternative measure passed the second prong of the test, regardless of which way affected Class I areas are identified. A summary of the results of the second prong of the test for the Transport Rule and national regions under each control scenario is presented in Table 3.

**Table 3. Average Visibility Improvement in 2014 v. 2014 Base Case (Deciviews)**

	"Transport Rule + BART-elsewhere"	"Nationwide BART"
60 Class I Areas in the Eastern Transport Rule Modeling Domain		
20 percent Worst Days	1.6	1.0
20 percent Best Days	0.3	0.2
140 Class I Areas in the Western and Eastern Transport Rule Modeling Domains		
20 percent Worst Days	0.7	0.5
20 percent Best Days	0.1	0.1

F. Proposed Amendment to the Regional Haze Rule

Based on our finding that the "Transport Rule + BART-elsewhere" control scenario passes the two-pronged test, we are proposing to determine that the Transport Rule trading programs will provide greater progress towards regional haze goals than source-specific BART. This proposed determination applies only to EGUs in the Transport Rule trading programs and only for the pollutants covered by the programs in each state. Accordingly, we propose to revise 40



CFR 51.308(e)(3)(ii)(4) by essentially replacing the name of CAIR with the name of the Transport Rule.

We are also proposing that a state that chooses to meet the emission reduction requirements of the Transport Rule by submitting a complete SIP revision substantively identical to the provisions of the EPA trading program that is approved as meeting the requirements of section 52.38 and/or section 52.39 also need not require BART-eligible EGUs in the state to install, operate, and maintain BART for the pollutants covered by such a trading program in the state.

We are preserving the language in the regional haze regulations at 40 CFR 51.308(e)(4) that allows states to include in their SIPs geographic enhancements to the alternative program to accommodate a situation where BART is required based on reasonable attribution of visibility impairment at a Class I area.

A number of the states for which we are proposing a FIP had previously failed to either submit a visibility SIP or had failed to submit a SIP that could be fully approved under the visibility regulations issued in 1980. See 45 FR 80084 (December 2, 1980). The proposed regulatory text is drafted to take account of this and is not intended to change the findings that have been made in the past with respect to the relevant states' compliance with the requirements of visibility regulations found at 40 CFR 51.302-51.307.

#### **V. Proposed Limited Disapproval of Certain States' Regional Haze SIPs**

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/23/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

In this action, we are proposing a limited disapproval of the regional haze SIPs that have been submitted by Alabama, Florida, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina and Texas. These states, fully consistent with the EPA's regulations at the time, relied on CAIR requirements to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals.

We are not proposing to disapprove the reasonable progress targets for 2018 that are an element of the long-term strategies for these states. We made clear in the RHR that the reasonable progress goals are not mandatory standards in the sense of there being consequences if they are not met, because there are inherent uncertainties in projecting future emissions and resulting visibility conditions. See 64 FR 35733. However, to assess whether current implementation strategies will be sufficient to meet the reasonable progress goals, the RHR requires a midcourse review by each state and, if necessary, a correction of the state's regional haze plan. See 40 CFR 52.308(g). We anticipate that since the Transport Rule will result in greater emission reductions overall than CAIR, that the need for such corrections will be unlikely. Based on the information currently before us, we believe that the substitution of the Transport Rule for CAIR does not weaken any affected state's long-term strategy, but we will assess the midcourse review of each

state's SIP to ensure that this is so. We intend to act on the reasonable progress goals and long-term strategy (including the Transport Rule) and other requirements of the RHR (BART determinations for non-EGU sources, monitoring, consultation with federal land managers, etc.) for each state in an individual notice separately from the final rule for this action. Those individual notices will constitute the final action (approval or disapproval) on those other elements of the SIP.

The EPA has already proposed limited disapproval of regional haze SIPs that relied on CAIR that were submitted by Kentucky, Tennessee, Virginia and West Virginia. The remedies for the limited disapprovals previously proposed and those that are proposed in this action are FIPs as described in section VI.

## **VI. Proposed FIPs**

In this action, we are proposing partial regional haze FIPs for states for which we already have or are now proposing limited disapprovals because of the termination of CAIR. These limited FIPs would satisfy the BART requirement and be a part of satisfying the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals. The FIPs apply only to EGUs in the affected states and only to pollutants covered by the Transport Rule programs in those states. For the reasons discussed in section V., the proposed FIPs do not alter states' reasonable progress goals or replace these goals.

The proposed FIPs replace reliance on CAIR requirements with reliance on the Transport Rule as an alternative to BART for SO<sub>2</sub> and NO<sub>x</sub> emissions from EGUs in the following states' regional haze SIPs: Alabama, Georgia, Indiana, Iowa, Kentucky, Michigan, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia and West Virginia. The proposed FIPs replace reliance on CAIR requirements with reliance on the Transport Rule as an alternative to BART for NO<sub>x</sub> emissions from EGUs in the following states' regional haze SIPs: Florida, Louisiana and Mississippi.

Given the requirements of the CAA to promulgate a FIP after disapproving a SIP in whole or in part (CAA section 110(c)(1)), we consider it appropriate at this time to propose to issue FIPs to address the noted deficiencies in these states' regional haze SIPs related to the termination of CAIR and the replacement of CAIR with the Transport Rule. A state may choose to submit a SIP or remain subject to this FIP. The proposed regional haze FIPs rely on the trading programs set out in the FIPs promulgated by the EPA in August 2011 in the Transport Rule to limit the interstate transport of NO<sub>x</sub> and SO<sub>2</sub>.

## **VII. Statutory and Executive Order Reviews**

### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because some may view it

as raising novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Accordingly, the EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. Burden is defined at 5 CFR 1320.3(b). This action does not include or require any information collection.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as: (1) A small business that is a small industrial entity as defined in the U.S. Small Business

Administration (SBA) size standards. (See 13 CFR 121.); (2) A governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) A small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This rule will not impose any requirements on small entities. Rather, this proposed rule would allow states to avoid regulating EGUs in new ways based on the current requirements of the Transport Rule and as such does not impose any new requirements on small entities. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

#### D. Unfunded Mandates Reform Act

This action contains no federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA, 2 U.S.C. 1531 - 1538) for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action merely interprets the statutory requirements that apply to states in preparing their SIPs and thus apply also to FIPs.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action does not impose any new mandates on state or local governments. Thus, Executive Order 13132 does not apply to this rule.

In the spirit of Executive Order 13132 and consistent with EPA policy to promote communications between the EPA and state and local governments, the EPA is specifically soliciting comments on this proposed rule from state and local officials.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). The rule does not have a substantial direct effect on one or more Indian tribes, since there are no BART-eligible EGU sources on tribal lands in the Transport Rule region. In addition, the CAA does not provide for the

inclusion of any tribal areas as mandatory Class I federal areas; thus, tribal areas are not subject to the requirements of the RHR. Furthermore, this proposed rule does not affect the relationship or distribution of power and responsibilities between the federal government and Indian tribes. Thus, Executive Order 13175 does not apply to this action. The EPA specifically solicits additional comment on this proposed action from tribal officials.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not involve decisions on environmental health or safety risks that may disproportionately affect children. The EPA believes that the emissions reductions from the strategies in this rule will further improve air quality and will further improve children's health.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy because it does not establish



requirements that directly affect the general public and the public and private sectors. Rather, this proposed rule would allow states to avoid regulating EGUs in new ways based on the current requirements of the Transport Rule, and thus may avoid adverse effects that conceivably might result from such additional regulation of EGUs by states.

#### I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d), (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs the EPA to provide Congress, through OMB, explanations when the EPA decides not to use available and applicable voluntary consensus standards. This rulemaking does not involve technical standards. Therefore, the EPA is not considering the use of any voluntary consensus standards.

#### J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (EO) (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its

main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

When considering the possible environmental justice impacts of this proposed rule, it is important to distinguish the set of scenarios on which the better-than-BART analysis described in this notice is based from the set of possible future situations that could come to pass based on the outcome of this rulemaking. The Transport Rule is in place and will remain in place regardless of the outcome of this rulemaking. If we finalize the proposed rule, a regional haze SIP or FIP for an affected state will be able to satisfy the BART requirement for EGUs (for NO<sub>x</sub> only or for SO<sub>2</sub> and NO<sub>x</sub>, depending on which Transport Rule programs apply in that state) merely by formally incorporating the Transport Rule into the long-term strategy of the SIP.<sup>34</sup> If we do not adopt any rule establishing the Transport Rule as an alternative to BART, the EGUs in each affected state will still be required to participate in the cap-and-trade programs established by the Transport Rule. In this case, the SIP or FIP would also have to apply source-specific BART to all BART-eligible sources except any

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<sup>34</sup> Such action by a state would not preclude it from also including in the SIP source-specific emission limits for EGUs of its choosing.

that are found not to be subject to BART due to minimal impacts on visibility or any that the state concludes should not be further controlled based on its consideration of existing controls, cost of additional controls, remaining lifetime of the unit, other non-air impacts and visibility impacts from controls. It is important to recognize that because of the nature of cap-and-trade programs, total state-wide emissions will not be very different, if at all, if the EPA were not to make a final determination that participation in the Transport Rule trading programs satisfied the BART requirements. Any EGUs participating in the Transport Rule trading programs that would be required to comply with source-specific BART would generate tradable emission allowances that would find buyers among the other EGUs in the state. Thus, we expect that the outcome of the Transport Rule may change how a fixed amount of total emissions from EGUs is divided among EGUs in a given affected state. Because of the certainty of EGUs collectively meeting the Transport Rule emission caps, that fixed amount of emissions will generally be substantially less than historical total EGU emissions in a given state.

We have concluded that it is not practicable to perform an analysis which would attempt to predict exactly which EGUs would have higher and lower emissions under the Transport Rule trading programs and source-specific BART. We have, however, identified the locations of BART-eligible sources in Transport Rule-affected states to determine if there are high percentages of minority or low-income

populations living near such sources. These are the sources that conceivably could have higher emissions if we finalize the proposed rule than if we do not. An analysis of demographic data shows that the average percentage of African Americans living within a 3-mile radius of BART-eligible sources in Transport Rule-affected states is somewhat higher (18 percent) than the corresponding national average (12 percent). All other socio-demographic parameters evaluated are within two percent of the national average percentages, or below the national average percentages. The results of the demographic analysis are presented in the memorandum titled, "Demographic Proximity Analysis for BART-Eligible Electric Generating Units," July 2011, a copy of which is available in the docket (EPA-HQ-OAR-2011-0729). Strictly speaking, if we were not to finalize this rule and the states (or we, through FIPs) were to impose source-specific BART on these sources, other sources might increase their emissions under the cap-and-trade programs. Since we do not know which other sources might do so, we could not perform a similar demographic analysis on such other sources.

We do know that under the Transport Rule, ozone and PM<sub>2.5</sub> air quality and health risks will be greatly reduced compared either to current conditions or to future conditions if there were no Transport Rule. In the Transport Rule, the EPA estimated the distribution of PM<sub>2.5</sub> mortality risks according to race, income, and educational attainment before and after implementation of the Transport Rule. In

that analysis, we found that the Transport Rule market-based regional approach to reducing emissions of SO<sub>2</sub> and NO<sub>x</sub> from EGUs provided the greatest PM<sub>2.5</sub>-related health benefits among populations: (1) most susceptible to air pollution impacts, regardless of race; (2) with lower levels of educational attainment; and (3) living in counties with among the highest number of individuals living below the poverty line. The analysis also indicates that the Transport Rule, in conjunction with the implementation of existing or proposed rules, will reduce the disparity in risk between the highest-risk counties and the other 95 percent of counties for all races and educational levels. This analysis is presented in more detail in the Regulatory Impact Analysis for the Transport Rule which is available in the Transport Rule docket EPA-HQ-OAR-2009-0491 and from the main EPA webpage for the Transport Rule [www.epa.gov/airtransport](http://www.epa.gov/airtransport).

The results of the Transport Rule analysis suggest that regional reductions in PM<sub>2.5</sub> levels can produce significant human health benefits – particularly among populations most susceptible and vulnerable to PM<sub>2.5</sub> impacts. PM<sub>2.5</sub> air quality improvements that would be expected under implementation of source-specific BART may differ from the Transport Rule in terms of the emission reductions required at any given source, especially since states have the discretion to determine which BART-eligible sources to control and the level of control that is feasible. However, the results of the Transport Rule assessment suggest that the regional Transport Rule approach provides

widespread health benefits especially among populations at greatest risk.

## **List of Subjects**

### **40 CFR Part 51**

Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Regional haze, Reporting and recordkeeping requirements, Sulfur dioxide.

**Page 59 of 71 - Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans**

**40 CFR Part 52**

Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Regional haze, Reporting and recordkeeping requirements, Sulfur dioxide.

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Dated:

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Lisa P. Jackson,  
Administrator.

For the reasons set forth in the preamble, part 51 of chapter I of title 40 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 51-[AMENDED]**

1. The authority citation for part 51 continues to read as follows:

**Authority:** 23 U.S.C. 101; 42 U.S.C. 7401-7671q

2. Section 51.308 is amended by revising paragraph (e) (3) (ii) (4) to read as follows:

**§51.308 Regional haze program requirements**

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(4) A State subject to a trading program established in accordance with §52.38 or §52.39 under a Transport Rule Federal Implementation Plan need not require BART-eligible fossil fuel-fired electric steam generating plants in the State to install, operate, and maintain BART for the pollutant covered by such trading program in the State. A State that chooses to meet the emission reduction requirements of the Transport Rule by submitting a SIP revision that establishes a trading program and is approved as meeting the requirements of §52.38 or §52.39 also need not require BART-eligible fossil fuel-fired electric steam generating plants in the State to install, operate, and maintain BART for the pollutant covered by such trading program in the State. A State may adopt provisions, consistent with the requirements applicable to the State for a trading program



established in accordance with §52.38 or §52.39 under the Transport Rule Federal Implementation Plan or established under a SIP revision that is approved as meeting the requirements of §52.38 or §52.39, for a geographic enhancement to the program to address the requirement under §51.302(c) related to BART for reasonably attributable impairment from the pollutant covered by such trading program in that State.

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

**PART 52-[AMENDED]**

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

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

**Subpart B-Alabama**

2. Section 52.61 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

**§52.61 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(c) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.54 for the sources subject to those requirements.

(d) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.55 for the sources subject to those requirements.

#### **Subpart K-Florida**

3. Section 52.534 is amended by revising paragraph (a) and adding new paragraph (c) as follows:

##### **§52.534 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.305, 51.307, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(c) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.540 for the sources subject to those requirements.

#### **Subpart L-Georgia**

4. Section 52.580 is added to read as follows:

##### **§52.580 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.584 with respect to emissions of NO<sub>x</sub> for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.585 for the sources subject to those requirements.

#### **Subpart P-Indiana**

5. Section 52.791 is added to read as follows:

##### **§52.791 Visibility protection.**

a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.789 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.790 for the sources subject to those requirements.

#### **Subpart Q-Iowa**

6. Section 52.842 is added to read as follows:

##### **§52.842 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d) (3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.840 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.841 for the sources subject to those requirements.

#### **Subpart S-Kentucky**

7. Section 52.936 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

#### **§52.936 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.307(b) and (c), 51.308 (d) (3), and 51.308 (e) for protection of visibility in mandatory Class 1 federal areas.

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(c) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.940 for the sources subject to those requirements.

(d) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.941 for the sources subject to those requirements.

**Subpart T-Louisiana**

8. Section 52.985 is added to read as follows:

**§52.985 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d) (3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.984 for the sources subject to those requirements.

**Subpart X-Michigan**

9. Section 52.1183 is amended by revising paragraph (a) and adding new paragraphs (d) and (e) to read as follows:

**§52.1183 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.305, 51.307, 51.308(d) (3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(d) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.1186 for the sources subject to those requirements.

(e) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.1187 for the sources subject to those requirements.

#### **Subpart Z-Mississippi**

10. Section 52.1279 is added to read as follows:

##### **§52.1279 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.1284 for the sources subject to those requirements.

#### **Subpart AA-Missouri**

11. Section 52.1339 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

##### **§52.1339 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(c) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.1236 for the sources subject to those requirements.

(d) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.1327 for the sources subject to those requirements.

#### **Subpart II-North Carolina**

12. Section 52.1779 is added to read as follows:

##### **§52.1779 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d) (3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.1784 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.1785 for the sources subject to those requirements.

#### **Subpart KK-Ohio**

13. Section 52.1886 is added to read as follows:

##### **§52.1886 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d) (3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.1882 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.1883 for the sources subject to those requirements.

#### **Subpart NN-Pennsylvania**

14. Section 52.2042 is added to read as follows:

#### **§52.2042 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d) (3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2040 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2041 for the sources subject to those requirements.

#### **Subpart PP-South Carolina**



15. Section 52.2132 is amended by revising paragraph (a) and adding new paragraphs (d) and (e) to read as follows:

**§52.2132 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.305, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(d) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2140 for the sources subject to those requirements.

(e) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2141 for the sources subject to those requirements.

**Subpart RR-Tennessee**

16. Section 52.2234 is added to read as follows:

**§52.2234 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

(b) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2240 for the sources subject to those requirements.

(c) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2241 for the sources subject to those requirements.

#### **Subpart SS-Texas**

17. Section 52.2304 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

##### **§52.2304 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.305, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(c) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2283 for the sources subject to those requirements.

(d) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2284 for the sources subject to those requirements.

#### **Subpart VV-Virginia**

18. Section 52.2452 is amended by revising paragraph (a) and adding new paragraphs (d) and (e) to read as follows:

**§52.2452 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.305, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(d) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2440) for the sources subject to those requirements.

(e) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2441 for the sources subject to those requirements.

**Subpart XX-West Virginia**

19. Section 52.2533 is amended by revising paragraph (a) and adding new paragraphs (d) and (e) to read as follows:

**§52.2533 Visibility protection.**

(a) The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.305, 51.307, 51.308(d)(3), and 51.308(e) for protection of visibility in mandatory Class I Federal areas.

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(d) *Best Available Retrofit Technology for NO<sub>x</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of NO<sub>x</sub> are satisfied by §52.2540 for the sources subject to those requirements.

(e) *Best Available Retrofit Technology for SO<sub>2</sub>*. The requirements of 40 CFR 51.308(e) with respect to emissions of SO<sub>2</sub> are satisfied by §52.2541 for the sources subject to those requirements.