perform activities conducive to the use of VCS.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxide, Volatile organic compounds.

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

Dated: February 15, 2012.

A. Stanley Meiburg,

Acting Regional Administrator, Region 4.

[FR Doc. 2012–4661 Filed 2–27–12; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R04–OAR–2009–0785–201041; FRL–9637–8]

Approval and Promulgation of Air Quality Implementation Plans; South Carolina; Regional Haze State Implementation Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a limited approval of a revision to the South Carolina state implementation plan (SIP) submitted by the State of South Carolina, through the South Carolina Department of Health and Environmental Control (SC DHEC), on December 17, 2007, that addresses regional haze for the first implementation period. This revision addresses the requirements of the Clean Air Act (CAA or Act) and EPA's rules that require states to prevent any future and remedy any existing anthropogenic impairment of visibility in mandatory Class I areas (national parks and wilderness areas) caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the ''regional haze program''). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. EPA is proposing a limited approval of this SIP revision to implement the regional haze requirements for South Carolina on the basis that the revision, as a whole, strengthens the South Carolina SIP. Additionally, EPA is proposing to rescind the Federal regulations previously approved into the South Carolina SIP on July 12, 1985, and November 24, 1987, and to rely on the provisions in South Carolina's December 17, 2007, SIP submittal to meet the monitoring and long-term strategy (LTS) requirements for reasonably attributable visibility impairment (RAVI). EPA has previously proposed a limited disapproval of the South Carolina regional haze SIP because of deficiencies in the State's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia Circuit (DC Circuit) to EPA of the Clean Air Interstate Rule (CAIR). Consequently, EPA is not proposing to take action in this rulemaking to address the State's reliance on CAIR to meet certain regional haze requirements.

DATES: Comments must be received on or before March 29, 2012.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R04–OAR–2009–0785, by one of the following methods:

1. *www.regulations.gov:* Follow the on-line instructions for submitting comments.
2. *Email: benjamin.lynorae@epa.gov.*
3. *Fax:* 404–562–9019.
4. *Mail:* EPA–R04–OAR–2009–0785, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960.
5. *Hand Delivery or Courier:* Lynorae Benjamin, Chief, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. ''EPA–R04–OAR–2009–0785.'' 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, 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 through *www.regulations.gov* or email, information that you consider to be CBI or otherwise protected. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means 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 EPA without going through *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, 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 EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the electronic docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Michele Notarianni or Sara Waterson, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960. Michele Notarianni can be reached at telephone number (404) 562–9031 and by electronic mail at *notarianni.michele@epa.gov*. Sara Waterson can be reached at telephone number (404) 562–9061 and by

electronic mail at *waterson.sara@epa.gov*.

SUPPLEMENTARY INFORMATION:

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I. What action is EPA proposing to take?

EPA is proposing a limited approval of South Carolina's December 17, 2007, SIP revision addressing regional haze under CAA sections 301(a) and 110(k)(3) because the revision as a whole strengthens the South Carolina SIP. This proposed rulemaking and the accompanying Technical Support Document [1] (TSD) explain the basis for EPA's proposed limited approval action.[2]

In a separate action, EPA has proposed a limited disapproval of the South Carolina regional haze SIP because of deficiencies in the State's regional haze SIP submittal arising from the State's reliance on CAIR to meet certain regional haze requirements. *See* 76 FR 82219 (December 30, 2011). EPA is not proposing to take action in today's rulemaking on issues associated with South Carolina's reliance on CAIR in its regional haze SIP. Comments on EPA's proposed limited disapproval of South Carolina's regional haze SIP are accepted at the docket for EPA's December 30, 2011, proposed rulemaking (*see* Docket ID No. EPA–HQ–OAR–2011–0729). The comment period for EPA's December 30, 2011, proposed rulemaking is scheduled to end on February 28, 2012.

In this action, EPA is also proposing to rescind the Federal regulations in 40 CFR 52.2132 that were approved into the South Carolina SIP. *See* 50 FR 28544 (July 12, 1985) and 52 FR 45132 (November 24, 1987). In summary, EPA is proposing to rely on the provisions in South Carolina's December 17, 2007, SIP submittal to meet the monitoring and LTS requirements for RAVI at 40 CFR 51.305 and 40 CFR 51.306.

II. What is the background for 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 ($PM_{2.5}$) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), and their precursors (e.g., sulfur dioxide (SO_2), nitrogen oxides (NO_X), and in some cases, ammonia (NH_3) 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, color, and visible distance that one can see. $PM_{2.5}$ 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 [3] in many Class I areas [4] (i.e., national parks and memorial parks, wilderness areas, and international parks meeting certain size criteria) in the western United States is 100–150 kilometers, 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 areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. *See* 64 FR 35715 (July 1, 1999).

B. Requirements of the CAA and EPA's Regional Haze Rule (RHR)

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 areas which impairment results from manmade air pollution.'' On December 2, 1980, EPA promulgated regulations to

[1] EPA's TSD to this action, entitled, ''*Technical Support Document for South Carolina Regional Haze SIP Submittal,*'' is included in the public docket for this action.

[2] Under CAA sections 301(a) and 110(k)(6) and EPA's long-standing guidance, a limited approval results in approval of the entire SIP submittal, even of those parts that are deficient and prevent EPA from granting a full approval of the SIP revision. *Processing of State Implementation Plan (SIP) Revisions,* EPA Memorandum from John Calcagni, Director, Air Quality Management Division, OAQPS, to Air Division Directors, EPA Regional Offices I–X, September 7, 1992, (1992 Calcagni Memorandum) located at: *http://www.epa.gov/ttn/caaa/t1/memoranda/siproc.pdf*.

[3] Visual range is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky.

[4] Areas designated as mandatory Class I areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. *See* 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. *See* 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. *See* 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 area is the responsibility of a ''Federal Land Manager.'' *See* 42 U.S.C. 7602(i). When the term ''Class I area'' is used in this action, it means a ''mandatory Class I federal area.''

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.'' *See* 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. 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. EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35713), the RHR. 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 EPA's visibility protection regulations at 40 CFR 51.300–309. Some of the main elements of the regional haze requirements are summarized in section III of this preamble. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and the Virgin Islands.[5] 40 CFR 51.308(b) requires states to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007.

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among states, tribal governments, and various Federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, states need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to regional haze can originate from sources located across broad geographic areas, EPA has encouraged the states and tribes across the United States to address visibility impairment from a regional perspective. Five regional planning organizations (RPOs) were developed to address regional haze and related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country, and then pursued the development of regional strategies to reduce emissions of particulate matter (PM) and other pollutants leading to regional haze.

The Visibility Improvement State and Tribal Association of the Southeast (VISTAS) RPO is a collaborative effort of state governments, tribal governments, and various Federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility and other air quality issues in the Southeastern United States. Member state and tribal governments include: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, and the Eastern Band of the Cherokee Indians.

III. What are the requirements for regional haze SIPs?

A. The CAA and the RHR

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require states to establish long-term strategies for making reasonable progress toward meeting this goal. Implementation plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install BART controls for the purpose of eliminating or reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

B. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview as the principal metric or unit for expressing visibility. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in deciviews is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm function. The deciview is a more useful measure for tracking progress in improving visibility than light extinction itself because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.[6]

The deciview is used in expressing RPGs (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure ''reasonable progress'' toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution by reducing anthropogenic emissions that cause regional haze. The national goal is a return to natural conditions, i.e., anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401–437), and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP submittal and periodically review progress every five years, i.e., midway through each 10-year implementation period. To do this, the RHR requires states to determine the degree of impairment (in deciviews) for the average of the 20 percent least impaired (''best'') and 20 percent most impaired (''worst'') visibility days over a specified time period at each of their Class I areas. In addition, states must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to states regarding how to calculate baseline, natural, and current visibility conditions in documents titled, EPA's *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule,* September 2003, (EPA–454/B–03–005 located at *http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf*), (hereinafter referred to as ''EPA's 2003 Natural Visibility Guidance''), and *Guidance for Tracking Progress Under the Regional*

[5] Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the entire State of New Mexico under the New Mexico Air Quality Control Act (section 74–2–4).

[6] The preamble to the RHR provides additional details about the deciview. *See* 64 FR 35714, 35725 (July 1, 1999).

Haze Rule, September 2003, (EPA–454/B–03–004 located at *http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf*), (hereinafter referred to as ''EPA's 2003 Tracking Progress Guidance'').

For the first regional haze SIPs that were due by December 17, 2007, ''baseline visibility conditions'' were the starting points for assessing ''current'' visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent least impaired days and 20 percent most impaired days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000–2004 baseline period is considered the time from which improvement in visibility is measured.

C. Determination of Reasonable Progress Goals (RPGs)

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two RPGs (i.e., two distinct goals, one for the ''best'' and one for the ''worst'' days) for every Class I area for each (approximately) 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for ''reasonable progress'' toward achieving natural (i.e., ''background'') visibility conditions. In setting RPGs, states must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP, and ensure no degradation in visibility for the least impaired days over the same period.

States have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in EPA's RHR at 40 CFR 51.308(d)(1)(i)(A): (1) The costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. States must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in EPA's *Guidance for Setting Reasonable Progress Goals Under the Regional Haze Program* (''EPA's Reasonable Progress Guidance''), July 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1–10 (pp. 4–2, 5–1). In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 (referred to as the ''uniform rate of progress'' or the ''glidepath'') and the emissions reduction measures needed to achieve that rate of progress over the 10-year period of the SIP. Uniform progress towards achievement of natural conditions by the year 2064 represents a rate of progress which states are to use for analytical comparison to the amount of progress they expect to achieve. In setting RPGs, each state with one or more Class I areas (''Class I state'') must also consult with potentially ''contributing states,'' i.e., other nearby states with emissions sources that may be affecting visibility impairment at the Class I state's areas. *See* 40 CFR 51.308(d)(1)(iv).

D. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these 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 [7] 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, 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.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR part 51 (hereinafter referred to as the ''BART Guidelines'') to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emissions limits for each applicable source. In making a BART determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts, a state must use the approach set forth in the BART Guidelines. A state is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO_2, NO_X, and PM. EPA has stated that states should use their best judgment in determining whether VOC or NH_3 compounds impair visibility in Class I areas.

Under the BART Guidelines, states may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emissions sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Any exemption threshold set by the state should not be higher than 0.5 deciview.

In their SIPs, states must identify potential BART sources, described as ''BART-eligible sources'' in the RHR, and document their BART control determination analyses. In making BART determinations, section 169A(g)(2) of the CAA requires that states consider the following factors: (1) The costs of compliance, (2) the energy and non-air quality environmental impacts of compliance, (3) any existing pollution control technology in use at the source, (4) the remaining useful life of the source, and (5) the degree of improvement in visibility which may

[7] The set of ''major stationary sources'' potentially subject to BART is listed in CAA section 169A(g)(7).

reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance to be assigned to each factor.

A regional haze SIP must include source-specific BART emissions limits and compliance schedules for each source subject to BART. Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the regional haze SIP. *See* CAA section 169(g)(4); *see* 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source.

As noted above, the RHR allows states to implement an alternative program in lieu of BART so long as the alternative program can be demonstrated to achieve greater reasonable progress toward the national visibility goal than would BART. Under regulations issued in 2005 revising the regional haze program, EPA made just such a demonstration for CAIR. *See* 70 FR 39104 (July 6, 2005). EPA's regulations provide that states participating in the CAIR cap-and trade program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or which remain subject to the CAIR Federal implementation plan in 40 CFR part 97 need not require affected BART-eligible electrical generating units (EGUs) to install, operate, and maintain BART for emissions of SO_2 and NO_X. *See* 40 CFR 51.308(e)(4). Because CAIR did not address direct emissions of PM, states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant. Challenges to CAIR, however, resulted in the remand of the rule to EPA. *See North Carolina* v. *EPA,* 550 F.3d 1176 (D.C. Cir. 2008).

EPA issued a new rule in 2011 to address the interstate transport of NO_X and SO_2 in the eastern United States. *See* 76 FR 48208 (August 8, 2011) (''the Transport Rule,'' also known as the Cross-State Air Pollution Rule). On December 30, 2011, EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would BART in the states in which the Transport Rule applies. *See* 76 FR 82219. Based on this proposed finding, EPA also proposed to revise the RHR to allow states to substitute participation in the trading programs under the Transport Rule for source-specific BART. EPA has not yet taken final action on that rule. Also on December 30, 2011, the D.C. Circuit issued an order addressing the status of the Transport Rule and CAIR in response to motions filed by numerous parties seeking a stay of the Transport Rule pending judicial review. In that order, the D.C. Circuit stayed the Transport Rule pending the court's resolutions of the petitions for review of that rule in *EME Homer Generation, L.P.* v. *EPA* (No. 11–1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer CAIR in the interim until the court rules on the petitions for review of the Transport Rule.

E. LTS

Consistent with the requirement in section 169A(b) of the CAA that states include in their regional haze SIP a 10 to 15 year strategy for making reasonable progress, section 51.308(d)(3) of the RHR requires that states include a LTS in their regional haze SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet applicable RPGs. The LTS must include ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals'' for all Class I areas within, or affected by emissions from, the state. *See* 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. *See* 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included, in its SIP, all measures necessary to obtain its share of the emissions reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to sufficiently address interstate visibility issues. This is especially true where two states belong to different RPOs.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS: (1) Emissions reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. *See* 40 CFR 51.308(d)(3)(v).

F. Coordinating Regional Haze and RAVI LTS

As part of the RHR, EPA revised 40 CFR 51.306(c) regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing regional haze visibility impairment, which was due December 17, 2007, in accordance with 40 CFR 51.308(b) and (c). On or before this date, the state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and regional haze, and the state must submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTS's, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic review of a state's LTS must report on both regional haze and RAVI impairment and must be submitted to EPA as a SIP revision.

G. Monitoring Strategy and Other Implementation Plan Requirements

Section 51.308(d)(4) of the RHR includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I areas within the state. The strategy must be coordinated with the monitoring strategy required in section 51.305 for RAVI. Compliance with this requirement may be met through ''participation'' in the IMPROVE network, i.e., review and use of monitoring data from the network. The monitoring strategy is due with the first regional haze SIP, and it must be reviewed every five years. The monitoring strategy must also provide for additional monitoring sites if the

IMPROVE network is not sufficient to determine whether RPGs will be met.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas both within and outside the state;
- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible, in electronic format;
- Developing a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. A state must also make a commitment to update the inventory periodically; and
- Other elements, including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

The RHR requires control strategies to cover an initial implementation period extending to the year 2018, with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of section 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to the first regional haze SIP. Facilities subject to BART must continue to comply with the BART provisions of section 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

H. Consultation With States and Federal Land Managers (FLMs)

The RHR requires that states consult with FLMs before adopting and submitting their SIPs. *See* 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

IV. What is EPA's analysis of South Carolina's regional haze submittal?

On December 17, 2007, SC DHEC's Bureau of Air Quality submitted a revision to the South Carolina SIP to address regional haze in the State's Class I area as required by EPA's RHR.

A. Affected Class I Areas

South Carolina has one Class I area within its borders: the Cape Romain Wilderness Area (Cape Romain). South Carolina is responsible for developing a regional haze SIP that addresses this Class I area and for consulting with other states that impact South Carolina's Class I area. The State determined appropriate RPGs, including consulting with other states that impact the Class I area, as discussed in section IV.F.1. In addition, South Carolina is responsible for describing its long-term emissions strategies, its role in the consultation processes, and how its particular state SIP meets the other requirements in EPA's regional haze regulations.

The South Carolina regional haze SIP establishes RPGs for visibility improvement at this Class I area and an LTS to achieve those RPGs within the first regional haze implementation period ending in 2018. In developing the LTS, South Carolina considered both emissions sources inside and outside of South Carolina that may cause or contribute to visibility impairment in South Carolina's Class I area. The State also identified and considered emissions sources within South Carolina that may cause or contribute to visibility impairment in Class I areas in neighboring states as required by 40 CFR 51.308(d)(3). The VISTAS RPO worked with the State in developing the technical analyses used to make these determinations, including state-by-state contributions to visibility impairment in specific Class I areas, which included the one area in South Carolina and those areas affected by emissions from South Carolina.

B. Determination of Baseline, Natural and Current Visibility Conditions

As required by the RHR and in accordance with EPA's 2003 Natural Visibility Guidance, South Carolina calculated baseline/current and natural visibility conditions for its Class I area, as summarized below (and as further described in sections III.B.1 and III.B.2 of EPA's TSD to this **Federal Register** action).

1. Estimating Natural Visibility Conditions

Natural background visibility, as defined in EPA's 2003 Natural Visibility Guidance, is estimated by calculating the expected light extinction using default estimates of natural concentrations of fine particle components adjusted by site-specific estimates of humidity. This calculation uses the IMPROVE equation, which is a formula for estimating light extinction from the estimated natural concentrations of fine particle components (or from components measured by the IMPROVE monitors). As documented in EPA's 2003 Natural Visibility Guidance, EPA allows states to use ''refined'' or alternative approaches to the 2003 EPA guidance to estimate the values that characterize the natural visibility conditions of the Class I areas. One alternative approach is to develop and justify the use of alternative estimates of natural concentrations of fine particle components. Another alternative is to use the ''new IMPROVE equation'' that was adopted for use by the IMPROVE Steering Committee in December 2005.[8] The purpose of this refinement to the ''old IMPROVE equation'' is to provide more accurate estimates of the various factors that affect the calculation of light extinction. South Carolina opted to use the default estimates for the natural concentrations combined with the ''new IMPROVE equation'' for its Class I area. Using this approach, natural visibility conditions using the new IMPROVE equation were calculated separately for each Class I area by VISTAS.

[8] The IMPROVE program is a cooperative measurement effort governed by a steering committee composed of representatives from Federal agencies (including representatives from EPA and the FLMs) and RPOs. The IMPROVE monitoring program was established in 1985 to aid the creation of Federal and State implementation plans for the protection of visibility in Class I areas. One of the objectives of IMPROVE is to identify chemical species and emissions sources responsible for existing anthropogenic visibility impairment. The IMPROVE program has also been a key participant in visibility-related research, including the advancement of monitoring instrumentation, analysis techniques, visibility modeling, policy formulation and source attribution field studies.

The new IMPROVE equation takes into account the most recent review of the science [9] and it accounts for the effect of particle size distribution on light extinction efficiency of sulfate, nitrate, and organic carbon. It also adjusts the mass multiplier for organic carbon (particulate organic matter) by increasing it from 1.4 to 1.8. New terms are added to the equation to account for light extinction by sea salt and light absorption by gaseous nitrogen dioxide. Site-specific values are used for Rayleigh scattering (scattering of light due to atmospheric gases) to account for the site-specific effects of elevation and temperature. Separate relative humidity enhancement factors are used for small and large size distributions of ammonium sulfate and ammonium nitrate and for sea salt. The terms for the remaining contributors, elemental carbon (light-absorbing carbon), fine soil, and coarse mass terms, do not change between the original and new IMPROVE equations.

2. Estimating Baseline Conditions

SC DHEC estimated baseline visibility conditions at Cape Romain using available monitoring data from a single IMPROVE monitoring site. As explained in section III.B, baseline visibility conditions are the same as current conditions for the first regional haze SIP. A five-year average of the 2000 to 2004 monitoring data was calculated for each of the 20 percent worst and 20 percent best visibility days at the South Carolina Class I area. IMPROVE data records for Cape Romain for the period 2000 to 2004 meet EPA requirements for data completeness. See page 2–8 of EPA's 2003 Tracking Progress Guidance. Table 3.3–1 from Appendix G of the South Carolina regional haze SIP, also provided in section III.B.3 of EPA's TSD to this action, lists the 20 percent best and worst days for the baseline period of 2000–2004 for Cape Romain. These data are also provided at the following Web site: *http://www.metro4-sesarm.org/vistas/SesarmBext_20BW.htm.*

3. Summary of Baseline and Natural Conditions

For the South Carolina Class I area, baseline visibility conditions on the 20 percent worst days are generally between 25 and 30 deciviews. Natural visibility in this area is predicted to be between approximately 12 and 13 deciviews on the 20 percent worst days. The natural and baseline conditions for South Carolina's Class I area for both the 20 percent worst and best days are presented in Table 1 below.

TABLE 1—NATURAL BACKGROUND AND BASELINE CONDITIONS FOR THE CAPE ROMAIN CLASS I AREA

Condition	Average for 20% worst days (dv [10])	Average for 20% best days (dv)
Baseline Visibility Conditions 2000–2004	26.5	14.3
Natural Background Visibility Conditions	12.2	5.9

4. Uniform Rate of Progress

In setting the RPGs, South Carolina considered the uniform rate of progress needed to reach natural visibility conditions by 2064 (''glidepath'') and the emissions reduction measures needed to achieve that rate of progress over the period of the SIP to meet the requirements of 40 CFR 51.308(d)(1)(i)(B). As explained in EPA's Reasonable Progress Guidance document, the uniform rate of progress is not a presumptive target, and RPGs may be greater, lesser, or equivalent to the glidepath.

The State's implementation plan presents two sets of graphs, one for the 20 percent best days, and one for the 20 percent worst days, for its Class I area. South Carolina constructed the graph for the worst days (i.e., the glidepath) in accordance with EPA's 2003 Tracking Progress Guidance by plotting a straight graphical line from the baseline level of visibility impairment for 2000–2004 to the level of visibility conditions representing no anthropogenic impairment in 2064 for the Cape Romain area. For the best days, the graph includes a horizontal, straight line spanning from baseline conditions in 2004 out to 2018 to depict no degradation in visibility over the implementation period of the SIP. South Carolina's SIP shows that the State's RPGs for its area provide for improvement in visibility for the 20 percent worst days over the period of the implementation plan and ensure no degradation in visibility for the 20 percent best days over the same period, in accordance with 40 CFR 51.308(d)(1).

For Cape Romain, the overall visibility improvement necessary to reach natural conditions is the difference between baseline visibility of 26.48 deciviews for the 20 percent worst days and natural conditions of 12.21 deciviews, i.e., 14.27 deciviews. Over the 60-year period from 2004 to 2064, this would require an approximate average improvement of 0.24 deciview per year (i.e., 14.27 deciviews/60 years) to reach natural conditions. Hence, for the 14-year period from 2004 to 2018, in order to achieve visibility improvement at least equivalent to the uniform rate of progress for the 20 percent worst days at Cape Romain, a visibility improvement of at least 3.36 deciviews would be needed over the first implementation period (i.e., 0.24 deciview × 14 years = 3.36 deciviews) from the baseline visibility of 26.48 deciviews, resulting in visibility levels at or below 23.12 deciviews in 2018. As discussed below in section IV.C.7, South Carolina projects a 3.8 deciview improvement to visibility from the 2004 baseline of 26.5 deciviews to 22.7 deciviews in 2018 for the 20 percent most impaired days, and a 1.5 deciview improvement to 12.7 deciviews from the baseline visibility of 14.2 deciviews for the 20 percent least impaired days.

C. Long-Term Strategy/Strategies

As described in section III.E of this action, the LTS is a compilation of state-specific control measures relied on by

[9] The science behind the revised IMPROVE equation is summarized in numerous published papers. *See,* e.g.: Hand, J.L., and Malm, W.C., 2006, *Review of the IMPROVE Equation for Estimating Ambient Light Extinction Coefficients—Final Report.* March 2006. Prepared for Interagency Monitoring of Protected Visual Environments (IMPROVE), Colorado State University, Cooperative Institute for Research in the Atmosphere, Fort Collins, Colorado. *http://vista.cira.colostate.edu/improve/publications/GrayLit/016_IMPROVEeqReview/IMPROVEeqReview.htm;* and Pitchford, Marc., 2006, *Natural Haze Levels II: Application of the New IMPROVE Algorithm to Natural Species Concentrations Estimates.* Final Report of the Natural Haze Levels II Committee to the RPO Monitoring/Data Analysis Workgroup. September 2006. *http://vista.cira.colostate.edu/improve/Publications/GrayLit/029_NaturalCondII/naturalhazelevelsIIreport.ppt.*

[10] The term, ''dv,'' is the abbreviation for ''deciview.''

the state for achieving its RPGs. South Carolina's LTS for the first implementation period addresses the emissions reductions from Federal, state, and local controls that take effect in the State from the end of the baseline period starting in 2004 until 2018. The South Carolina LTS was developed by the State, in coordination with the VISTAS RPO, through an evaluation of the following components: (1) Identification of the emissions units within South Carolina and in surrounding states that likely have the largest impacts currently on visibility at the State's Class I area; (2) estimation of emissions reductions for 2018 based on all controls required or expected under Federal and state regulations for the 2004–2018 period (including BART); (3) comparison of projected visibility improvement with the uniform rate of progress for the State's Class I area; and (4) application of the four statutory factors in the reasonable progress analysis for the identified emissions units to determine if additional reasonable controls were required.

In a separate action proposing limited disapproval of the regional haze SIPs of a number of states, EPA noted that these states relied on the trading programs of CAIR to satisfy the BART requirement and the requirement for a LTS sufficient to achieve the state-adopted reasonable progress goals. *See* 76 FR 82219 (December 30, 2011). In that action, EPA proposed a limited disapproval of South Carolina's regional haze SIP submittal insofar as the SIP relied on CAIR. For that reason, EPA is not taking action on that aspect of South Carolina's regional haze SIP in this action. Comments on the December 30, 2011, proposed determination were accepted at Docket ID No. EPA–HQ–OAR–2011–0729. The comment period for EPA's December 30, 2011, proposed rulemaking is scheduled to end on February 28, 2012.

1. Emissions Inventory for 2018 With Federal and State Control Requirements

The emissions inventory used in the regional haze technical analyses was developed by VISTAS with assistance from South Carolina. The 2018 emissions inventory was developed by projecting 2002 emissions and applying reductions expected from Federal and state regulations affecting the emissions of VOC and the visibility-impairing pollutants NO_X, PM, and SO_2. The BART Guidelines direct states to exercise judgment in deciding whether VOC and NH_3 impair visibility in their Class I area(s). As discussed further in section IV.C.3, VISTAS performed modeling sensitivity analyses, which demonstrated that anthropogenic emissions of VOC and NH_3 do not significantly impair visibility in the VISTAS region. Thus, while emissions inventories were also developed for NH_3 and VOC, and applicable Federal VOC reductions were incorporated into South Carolina's regional haze analyses, South Carolina did not further evaluate NH_3 and VOC emissions sources for potential controls under BART or reasonable progress.

VISTAS developed emissions for five inventory source classifications: Stationary point and area sources, off-road and on-road mobile sources, and biogenic sources. Stationary point sources are those sources that emit greater than a specified tonnage per year, depending on the pollutant, with data provided at the facility level. Stationary area sources are those sources whose individual emissions are relatively small, but due to the large number of these sources, the collective emissions from the source category could be significant. VISTAS estimated emissions on a countywide level for the inventory categories of: (a) Stationary area sources; (b) off-road (or non-road) mobile sources (i.e., equipment that can move but does not use the roadways); and (c) biogenic sources (which are natural sources of emissions, such as trees). On-road mobile source emissions are estimated by vehicle type and road type, and are summed to the countywide level.

There are many Federal and state control programs being implemented that VISTAS and South Carolina anticipate will reduce emissions between the end of the baseline period and 2018. Emissions reductions from these control programs are projected to achieve substantial visibility improvement by 2018 in Cape Romain. The control programs relied upon by South Carolina include CAIR; EPA's NO_X SIP Call; North Carolina's Clean Smokestacks Act; Georgia's multi-pollutant rule; consent decrees for Santee Cooper, Tampa Electric, Virginia Electric and Power Company, Gulf Power-Plant Crist, and East Kentucky Power Cooperative; NO_X and/or VOC reductions from the control rules in 1-hour ozone SIPs for Atlanta, Birmingham, and Northern Kentucky; North Carolina's NO_X reasonably available control technology state rule for Philip Morris USA and Norandal USA in the Charlotte/Gastonia/Rock Hill 1997 8-hour ozone nonattainment area; Federal 2007 heavy duty diesel engine standards for on-road trucks and buses; Federal Tier 2 tailpipe controls for on-road vehicles; Federal large spark ignition and recreational vehicle controls; EPA's non-road diesel rules; South Carolina's *Smoke Management Guideline for Vegetative Debris Burning Operations* and state regulation, *Prohibition of Open Burning* (R. 61–62.2); and Early Action Compacts with 45 out of 46 counties in South Carolina to reduce pollution that creates ground-level ozone. Controls from various Federal Maximum Achievable Control Technology (MACT) rules were also utilized in the development of the 2018 emissions inventory projections. These MACT rules include the industrial boiler/process heater MACT (referred to as ''Industrial Boiler MACT''), the combustion turbine and reciprocating internal combustion engines MACTs, and the VOC 2-, 4-, 7-, and 10-year MACT standards.

Effective July 30, 2007, the D.C. Circuit mandated the vacatur and remand of the Industrial Boiler MACT Rule.[11] This MACT was vacated since it was directly affected by the vacatur and remand of the Commercial and Industrial Solid Waste Incinerator Definition Rule. EPA proposed a new Industrial Boiler MACT rule to address the vacatur on June 4, 2010, (75 FR 32006) and issued a final rule on March 21, 2011 (76 FR 15608). The VISTAS modeling included emissions reductions from the vacated Industrial Boiler MACT rule, and South Carolina did not redo its modeling analysis when the rule was re-issued. Even though South Carolina's modeling is based on the vacated Industrial Boiler MACT limits, the State's modeling conclusions are unlikely to be affected because the expected reductions due to the vacated rule were relatively small compared to the State's total SO_2, $PM_{2.5}$, and coarse particulate matter (PM_{10}) emissions in 2018 (i.e., 0.2 to 0.5 percent, depending on the pollutant, of the projected 2018 SO_2, $PM_{2.5}$, and PM_{10} inventory). Thus, EPA does not expect that differences between the vacated and final Industrial Boiler MACT emissions limits would affect the adequacy of the existing South Carolina regional haze SIP. If there is a need to address discrepancies between projected emissions reductions from the vacated Industrial Boiler MACT and the Industrial Boiler MACT issued March 21, 2011 (76 FR 15608), EPA expects South Carolina to do so in the State's five-year progress report.

[11] *See NRDC* v. *EPA,* 489 F.3d 1250 (D.C. Cir. 2007).

Below in Tables 2 and 3 are summaries of the 2002 baseline and 2018 estimated emissions inventories for South Carolina.

TABLE 2—2002 EMISSIONS INVENTORY SUMMARY FOR SOUTH CAROLINA

[Tons per year]

	VOC	NO_X	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	38,928	130,681	27,766	36,779	1,552	263,790
Area	175,666	24,602	63,802	287,162	29,074	14,087
On-Road Mobile	114,861	138,941	2,473	6,505	4,646	5,909
Off-Road Mobile	55,016	50,249	3,945	4,152	33	4,866
Total	384,471	344,473	97,986	334,598	35,305	288,652

TABLE 3—2018 EMISSIONS INVENTORY SUMMARY FOR SOUTH CAROLINA

[Tons per year]

	VOC	NO_X	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	44,562	95,477	36,118	53,054	2,396	146,851
Area	177,273	26,491	70,274	333,404	34,535	14,816
On-Road Mobile	41,866	39,348	988	3,994	5,878	584
Off-Road Mobile	36,131	31,758	2,474	2,617	41	1,198
Total	299,832	193,074	109,854	393,069	42,850	163,449

2. Modeling To Support the LTS and Determine Visibility Improvement for Uniform Rate of Progress

VISTAS performed modeling for the regional haze LTS for the 10 southeastern states, including South Carolina. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. VISTAS used the following modeling system:

- *Meteorological Model:* The Pennsylvania State University/National Center for Atmospheric Research Mesoscale Meteorological Model is a nonhydrostatic, prognostic, meteorological model routinely used for urban- and regional-scale photochemical, $PM_{2.5,}$ and regional haze regulatory modeling studies.
- *Emissions Model:* The Sparse Matrix Operator Kernel Emissions modeling system is an emissions modeling system that generates hourly gridded speciated emissions inputs of mobile, non-road mobile, area, point, fire, and biogenic emissions sources for photochemical grid models.
- *Air Quality Model:* The EPA's Models-3/Community Multiscale Air Quality (CMAQ) modeling system is a photochemical grid model capable of addressing ozone, PM, visibility, and acid deposition at a regional scale. The photochemical model selected for this study was CMAQ version 4.5. It was modified through VISTAS with a module for Secondary Organics Aerosols in an open and transparent manner that was also subjected to outside peer review.

CMAQ modeling of regional haze in the VISTAS region for 2002 and 2018 was carried out on a grid of 12×12 kilometer cells that covers the 10 VISTAS states (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia) and states adjacent to them. This grid is nested within a larger national CMAQ modeling grid of 36×36 kilometer grid cells that covers the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. Selection of a representative period of meteorology is crucial for evaluating baseline air quality conditions and projecting future changes in air quality due to changes in emissions of visibility-impairing pollutants. VISTAS conducted an in-depth analysis which resulted in the selection of the entire year of 2002 (January 1–December 31) as the best period of meteorology available for conducting the CMAQ modeling. The VISTAS states modeling was developed consistent with EPA's *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5,}$ and Regional Haze,* located at *http://www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf*, EPA–454/B–07–002, April 2007, and EPA document, *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,* located at *http://www.epa.gov/ttnchie1/eidocs/eiguid/index.html*, EPA–454/R–05–001, August 2005, updated November 2005 (''EPA's Modeling Guidance'').

VISTAS examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the regional haze assessment of the LTS and for use in the modeling assessment. The modeling assessment predicts future levels of emissions and visibility impairment used to support the LTS and to compare predicted, modeled visibility levels with those on the uniform rate of progress. In keeping with the objective of the CMAQ modeling platform, the air quality model performance was evaluated using graphical and statistical assessments based on measured ozone, fine particles, and acid deposition from various monitoring networks and databases for the 2002 base year. VISTAS used a diverse set of statistical parameters from the EPA's Modeling Guidance to stress and examine the model and modeling inputs. Once VISTAS determined the model performance to be acceptable, VISTAS used the model to assess the 2018 RPGs using the current and future year air quality modeling predictions, and compared the RPGs to the uniform rate of progress.

In accordance with 40 CFR 51.308(d)(3), the State of South Carolina provided the appropriate supporting documentation for all required analyses used to determine the State's LTS. The technical analyses and modeling used to

develop the glidepath and to support the LTS are consistent with EPA's RHR, and interim and final EPA Modeling Guidance. EPA proposes to accept the VISTAS technical modeling to support the LTS and determine visibility improvement for the uniform rate of progress because the modeling system was chosen and simulated according to EPA Modeling Guidance. EPA proposes to agree with the VISTAS model performance procedures and results, and that the CMAQ is an appropriate tool for the regional haze assessments for the South Carolina LTS and regional haze SIP.

3. Relative Contributions to Visibility Impairment: Pollutants, Source Categories, and Geographic Areas

An important step toward identifying reasonable progress measures is to identify the key pollutants contributing to visibility impairment at each Class I area. To understand the relative benefit of further reducing emissions from different pollutants, source sectors, and geographic areas, VISTAS developed emissions sensitivity model runs using CMAQ to evaluate visibility and air quality impacts from various groups of emissions and pollutant scenarios in the Class I areas on the 20 percent worst visibility days.

Regarding which pollutants are most significantly impacting visibility in the VISTAS region, VISTAS' contribution assessment, based on IMPROVE monitoring data, demonstrated that ammonium sulfate is the major contributor to $PM_{2.5}$ mass and visibility impairment at Class I areas in the VISTAS and neighboring states. On the 20 percent worst visibility days in 2000–2004, ammonium sulfate accounted for 75 to 87 percent of the calculated light extinction at the inland Class I areas in VISTAS, and 69 to 74 percent of the calculated light extinction for all but one of the coastal Class I areas in the VISTAS states. In particular, for Cape Romain, sulfate particles resulting from SO_2 emissions contribute roughly 71 percent to the calculated light extinction on the haziest days. In contrast, ammonium nitrate contributed less than five percent of the calculated light extinction at the VISTAS Class I areas on the 20 percent worst visibility days. Particulate organic matter (organic carbon) accounted for 20 percent or less of the light extinction on the 20 percent worst visibility days at the VISTAS Class I areas.

VISTAS grouped its 18 Class I areas into two types, either ''coastal'' or ''inland'' (sometimes referred to as ''mountain'') sites, based on common/similar characteristics (e.g., terrain, geography, meteorology), to better represent variations in model sensitivity and performance within the VISTAS region, and to describe the common factors influencing visibility conditions in the two types of Class I areas. South Carolina's Cape Romain area is classified as a ''coastal'' area.

Results from VISTAS' emissions sensitivity analyses indicate that sulfate particles resulting from SO_2 emissions are the dominant contributor to visibility impairment on the 20 percent worst days at all Class I areas in VISTAS. South Carolina concluded that reducing SO_2 emissions from EGU and non-EGU point sources in the VISTAS states would have the greatest visibility benefits for Cape Romain. Because ammonium nitrate is a small contributor to $PM_{2.5}$ mass and visibility impairment on the 20 percent worst days at the coastal Class I areas in VISTAS, which include Cape Romain, the benefits of reducing NO_X and NH_3 emissions at these sites are small. Some of the worst days at Cape Romain and other coastal sites within the VISTA region occur in the winter when ammonium nitrate has a somewhat larger contribution to visibility impairment. South Carolina concluded that reducing ammonia emissions would be more beneficial for reducing ammonium nitrate contributions to visibility impairment in wintertime than further reducing NO_X emissions from either ground or point sources.

The VISTAS' sensitivity analyses show that VOC emissions from biogenic sources such as vegetation also contribute to visibility impairment. However, control of these biogenic sources of VOC would be extremely difficult, if not impossible. The anthropogenic sources of VOC emissions are minor compared to the biogenic sources. Therefore, controlling anthropogenic sources of VOC emissions would have little if any visibility benefits at the Class I areas in the VISTAS region, including South Carolina's area. The sensitivity analyses also show that reducing primary carbon from point sources, ground level sources, or fires is projected to have small to no visibility benefit at the VISTAS Class I areas.

South Carolina considered the factors listed in under 40 CFR 51.308(d)(3)(v) and in section III.E of this action to develop its LTS as described below. South Carolina, in conjunction with VISTAS, demonstrated in its SIP that elemental carbon (a product of highway and non-road diesel engines, agricultural burning, prescribed fires, and wildfires), fine soils (a product of construction activities and activities that generate fugitive dust), and ammonia are relatively minor contributors to visibility impairment at the Class I area in South Carolina. South Carolina considered agricultural and forestry smoke management techniques, in conjunction with the State's open burning requirements, to address visibility impacts from elemental carbon. The South Carolina Forestry Commission (SCFC) developed a smoke management program (*Smoke Management Guideline for Vegetative Debris Burning Operations*), which regulates vegetative debris burning for forestry, agriculture, and wildlife purposes in the State. SC DHEC and SCFC have a memorandum of understanding (MOU) describing their respective roles in implementing the State's smoke management plan that utilizes basic smoke management practices and addresses the issues laid out in EPA's 1998 *Interim Air Quality Policy on Wildland and Prescribed Fires* available at: *http://www.epa.gov/ttncaaa1/t1/memoranda/firefnl.pdf.* SC DHEC notes in its SIP that this MOU represents the State's collective commitment to develop a comprehensive approach to establish and maintain a smoke management plan. In addition, SC DHEC's Bureau of Air Quality has developed a state air pollution control regulation (R. 61–62.2, *Prohibition of Open Burning*) that prohibits: (a) Open burning of any/all household garbage, (b) open burning for the purpose of land clearing or right of way maintenance in areas other than predominantly residential areas, and (c) open burning of residential construction waste from building and construction operations unless specific conditions are met. South Carolina notes in its SIP that, viewed together, the State's smoke management program and open burning requirements minimize visibility impacts from all sources of fire used for land management purposes within the State while recognizing the important ecological role of fires. With regard to fine soils, the State considered those activities that generate fugitive dust, including construction activities. Fine soil particles are minor contributors to visibility at Cape Romain. The State has chosen not to develop controls for fine soils in this first implementation period because of their relatively minor contribution to visibility impairment.

EPA preliminarily concurs with the State's technical demonstration showing that elemental carbon, fine soils, and ammonia are not significant contributors to visibility in the State's Class I area, and therefore, proposes to find that South Carolina has adequately

satisfied 40 CFR 51.308(d)(3)(v). EPA's TSD to this **Federal Register** action and South Carolina's SIP provide more details on the State's consideration of these factors for South Carolina's LTS.

The emissions sensitivity analyses conducted by VISTAS predict that reductions in SO_2 emissions from EGU and non-EGU industrial point sources will result in the greatest improvements in visibility in the Class I areas in the VISTAS region, more than any other visibility-impairing pollutant. Specific to South Carolina, the VISTAS sensitivity analysis projects visibility benefits in Cape Romain from SO_2 reductions from EGUs in eight of the 10 VISTAS states: Alabama, Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Additional, smaller benefits are projected from SO_2 emissions reductions from non-utility industrial point sources. SO_2 emissions contributions to visibility impairment from other RPO regions are comparatively small in contrast to the VISTAS states' contributions, and thus, controlling sources outside of the VISTAS region is predicted to provide less significant improvements in visibility in the Class I areas within VISTAS.

Taking the VISTAS sensitivity analyses results into consideration, South Carolina concluded that reducing SO_2 emissions from EGU and non-EGU point sources within South Carolina would have the greatest visibility benefits for Cape Romain. The State chose to focus solely on evaluating certain SO_2 sources contributing to visibility impairment to the State's Class I area for additional emissions reductions for reasonable progress in this first implementation period (described in sections IV.C.4 and IV.C.5 of this action). EPA proposes to agree with the State's analyses and conclusions used to determine the pollutants and source categories that most contribute to visibility impairment in the South Carolina Class I area, and proposes to find the State's approach to focus on developing a LTS that includes largely additional measures for point sources of SO_2 emissions to be appropriate.

SO_2 sources for which it is demonstrated that no additional controls are reasonable in this current implementation period will not be exempted from future assessments for controls in subsequent implementation periods or, when appropriate, from the five-year periodic SIP reviews. In future implementation periods, additional controls on these SO_2 sources evaluated in the first implementation period may be determined to be reasonable, based on a reasonable progress control evaluation, for continued progress toward natural conditions for the 20 percent worst days and to avoid further degradation of the 20 percent best days. Similarly, in subsequent implementation periods, the State may use different criteria for identifying sources for evaluation and may consider other pollutants as visibility conditions change over time.

4. Procedure for Identifying Sources To Evaluate for Reasonable Progress Controls in South Carolina and Surrounding Areas

As discussed in section IV.C.3 of this action, through comprehensive evaluations by VISTAS and the Southern Appalachian Mountains Initiative (SAMI),[12] the VISTAS states concluded that sulfate particles resulting from SO_2 emissions account for the greatest portion of the regional haze affecting the Class I areas in VISTAS states, including Cape Romain in South Carolina. Utility and non-utility boilers are the main sources of SO_2 emissions within the southeastern United States. VISTAS developed a methodology for South Carolina, which enables the State to focus its reasonable progress analysis on those geographic regions and source categories that impact visibility at its Class I area. Recognizing that there was neither sufficient time nor adequate resources available to evaluate all emissions units within a given area of influence (AOI) around each Class I area that South Carolina's sources impact, the State established a threshold to determine which emissions units would be evaluated for reasonable progress control. In applying this methodology, SC DHEC first calculated the fractional contribution to visibility impairment from all emissions units within the SO_2 AOI for Cape Romain and from those surrounding areas in other states potentially impacted by emissions from emissions units in South Carolina. The State then identified those emissions units with a contribution of one percent or more to the visibility impairment at that particular Class I area, and evaluated each of these units for control measures for reasonable progress, using the following four ''reasonable progress factors'' as required under 40 CFR 51.308(d)(1)(i)(A): (i) Cost of compliance; (ii) time necessary for compliance; (iii) energy and non-air quality environmental impacts of compliance; and (iv) remaining useful life of the emissions unit.

South Carolina's SO_2 AOI methodology captured greater than 80 percent of the total point source SO_2 contribution to visibility impairment in the Class I area in South Carolina and required an evaluation of 22 emissions units. Capturing a significantly greater percentage of the total contribution would involve an evaluation of many more emissions units that have substantially less impact. EPA believes the approach developed by VISTAS and implemented for the Class I area in South Carolina is a reasonable methodology to prioritize the most significant contributors to regional haze and to identify sources to assess for reasonable progress control in the State's Class I area. The approach is consistent with EPA's Reasonable Progress Guidance. The technical approach of VISTAS and South Carolina was objective and based on several analyses, which included a large universe of emissions units within and surrounding the State of South Carolina and all of the 18 VISTAS Class I areas. It also included an analysis of the VISTAS emissions units affecting nearby Class I areas surrounding the VISTAS states that are located in other RPOs' Class I areas.

5. Application of the Four CAA factors in the Reasonable Progress Analysis

SC DHEC identified 22 emissions units at 13 facilities in South Carolina (*see* Table 4) with SO_2 emissions that were above the State's minimum threshold for reasonable progress evaluation because they were modeled to fall within the sulfate AOI of any Class I area and have a one percent or greater contribution to the sulfate visibility impairment to at least one Class I area.[13] Using the expected costs of controls for EGUs complying with CAIR as an indicator of what might be reasonable for non-EGU sources, SC DHEC established a threshold of $2,000 per ton of SO_2 for controls. Next, an analysis of control options, generic costs of controls, and cost per ton for various units contributing greater than one

[12] Prior to VISTAS, the southern states cooperated in a voluntary regional partnership ''to identify and recommend reasonable measures to remedy existing and prevent future adverse effects from human-induced air pollution on the air quality related values of the Southern Appalachian Mountains.'' States cooperated with FLMs, EPA, industry, environmental organizations, and academia to complete a technical assessment of the impacts of acid deposition, ozone, and fine particles on sensitive resources in the Southern Appalachians. The SAMI Final Report was delivered in August 2002.

[13] *See* also EPA's TSD, section III.C.2, fractional contribution analysis tables for each Class I area, excerpted from the South Carolina's regional haze SIP submittal, Appendix H.

percent to any Class I area was developed and matched with data from AirControlNET, an EPA air pollution control cost database (accessible at: *http://www.epa.gov/ttnecas1/AirControlNET.htm*), to identify expected cost per ton reduced for the application of each of the specific control measures available for these units. SC DHEC then compared the range cost effectiveness estimates for these units to its cost threshold of $2,000 per ton for controls. As explained in section IV.C.5, 16 of these 22 emissions units were already subject to CAIR or were determined to not have a reasonable expectation of having control costs less than $2,000 per ton.

TABLE 4—SOUTH CAROLINA FACILITIES SUBJECT TO REASONABLE PROGRESS ANALYSIS

Facilities With Unit(s) Subject to Reasonable Progress Analysis:
DAK Americas, SC
Giant Cement, SC
Holcim Holly Hill, SC Units 1, 2
International Paper—Georgetown, SC
MeadWestvaco, SC
Facilities With Unit(s) Subject to CAIR Within AOI of Any Class I Area:
EGUs Subject to CAIR:
Duke Energy—Lee, Units 1, 2, 3
Santee Cooper—Cross, Units 2, 3
Santee Cooper—Jefferies Units 3, 4
South Carolina Electric & Gas (SCE&G)—Canadys, Units 1, 2
SCE&G—Williams, Unit 1
Facilities With Unit(s) Evaluated using AirControlNET Only:
Alumax of South Carolina Units 2, 3, 4, 5
Cogen South
Showa Denko Carbon

A. Facilities With Emissions Unit(s) Subject to Reasonable Progress Analysis

SC DHEC analyzed whether SO_2 controls should be required for six units at five facilities, (DAK Americas, MeadWestvaco, Giant Cement, Holcim Holly Hill Units 1 and 2, and International Paper), based on a consideration of the four factors set out in the CAA and EPA's regulations. For the limited purpose of evaluating the cost of compliance for the reasonable progress assessment in this first regional haze SIP for the non-EGUs, SC DHEC concluded that it was not equitable to require non-EGUs to bear a greater economic burden than EGUs for a given control strategy. Using CAIR as a guide, SC DHEC used a cost of $2,000 per ton of SO_2 controlled or reduced as a threshold for cost effectiveness.

1. DAK Americas

DAK Americas operates a facility in Moncks Comer, South Carolina, which produces polyethylene terephthalate (also commonly known as ''PET'') and finishes it into synthetic fibers and bottle resin products. Boiler No. 2, a 206 million British thermal unit per hour (MMBtu/hr) bituminous coal-fired boiler, was subject to a reasonable progress control review. Currently, the existing air pollution control device is a baghouse to control PM and a one percent sulfur limit on the coal sulfur content to control sulfur emissions. Boiler No. 2 is the only coal-fired boiler at the site. SC DHEC reviewed five technologies for reasonable progress: Low-sulfur coal, wet flue gas desulfurization (FGD), spray dryer absorber (SDA), fluidized-bed combustion, and dry sorbent injection. The energy and non-air quality impacts of the options were qualitatively ranked according to the degree of energy usage and waste generation generally associated with each option. The FGD and SDA options are the most cost-effective options but would only reduce emissions 33–48 tons and are anticipated to be $3,758 and over $4,000 per ton, respectively. SC DHEC deemed all the available control options to be above its $2,000 per ton of SO_2 controlled cost effectiveness threshold.

2. Giant Cement Company (Giant)

Giant owns and operates a Portland cement manufacturing facility located in Harleyville, South Carolina. In 2005, Giant completed the modernization of its cement manufacturing facility. The modernized cement facility consists of one dry process cement kiln system that replaced four wet process cement kilns. The modernized cement kiln system is more energy efficient than the previous wet process cement kilns. A Prevention of Significant Deterioration (PSD) permit to construct and operate the kiln system was issued in 2003, and the first clinker was produced in March 2005. Based on the information in the reasonable progress control analysis that Giant provided, SC DHEC concluded that switching to low sulfur coal is not a cost effective solution to address SO_2 emissions at the Giant facility. Sulfur input to the cement kiln system as a result of coal usage is less than five percent of the total sulfur input, which corresponds to between 55 and 69 tons of SO_2 emitted per year. Switching to a low sulfur coal reduces emissions between 24 and 36 tons of SO_2 per year, but at a cost ranging from $7,801 to $11,152 per ton of SO_2 reduced. SC DHEC concluded that none of the control options would be below its cost effectiveness threshold for reasonable progress.

3. Holcim (US) Inc. (Holcim)

The Holcim Holly Hill Plant produces Portland cement. The two wet process cement kilns identified in the reasonable progress analysis at the Holly Hill facility were shut down in 2003 and eventually demolished. They were replaced with a single, more efficient preheater precalciner kiln system which began operation in 2003. Holcim prepared a reasonable progress control analysis to assess the potential switch to lower sulfur fuel oil from three percent sulfur coal, which is the sulfur level that the current permit is based upon. The analysis demonstrated that this switch would result in a maximum SO_2 reduction of 4,011 tons at an additional cost to Holcim of $41,039 per ton of SO_2 removed. SC DHEC concluded that additional reductions from this facility would be above its cost effectiveness threshold.

4. International Paper

International Paper operates a paper mill located in Georgetown, South Carolina. Units subject to a reasonable progress analysis are the No. 1 Power Boiler, No. 2 Power Boiler, No. 1 Recovery Boiler, and No. 2 Recovery

Boiler. The power boilers currently burn a diverse fuel mix consisting of wood, coal, tire-derived fuel, fuel oil, natural gas, and propane. These power boilers are permitted for several additional fuels that are currently not being utilized. The fuels that contribute to sulfur emissions are coal, tire-derived fuel, and No. 6 fuel oil. The recovery boilers primarily burn black liquor solids, but also burn limited amounts of No. 6 fuel oil, primarily during start-up (e.g., less than two percent of fuel input annually). International Paper prepared a reasonable progress control analysis which evaluated three fuel switching options.

The Mill evaluated switching sulfur-contributing fuels (coal, tire-derived fuel, and No. 6 fuel oil) with natural gas, low-sulfur fuel oil, and distillate oils for the reasonable progress control analysis. The first option was to replace all coal, No. 6 fuel oil, and tire-derived fuel with natural gas. The second option was to replace all sulfur fuels with low sulfur fuel oil. The Mill's title V permit limits No. 6 fuel oil consumption in the power boilers. Therefore, the Mill calculated the second option two ways: (a) Replacing as much fuel oil as possible with low sulfur fuel oil and leaving the balance as natural gas, and (b) assuming the Mill would not be limited on firing low sulfur fuel oil, calculating a complete fuel switch to low sulfur fuel oil. The third option was to replace all coal, No. 6 fuel oil, and tire-derived fuel with low sulfur distillate oils. The annual SO_2 emissions reductions from these options ranged from 2,281 to 3,284 tons of SO_2. However, the cost-effectiveness estimates for the fuel switching options ranged from $6,417 to $10,012 per ton SO_2, which are above SC DHEC's cost effectiveness threshold.

5. MeadWestvaco

MeadWestvaco Corporation operates a paper mill in North Charleston, South Carolina. MeadWestvaco Corporation submitted a reasonable progress control analysis for a switch to a lower sulfur fuel for the two recovery boilers listed in emissions unit ID 06 of title V Air Quality Operating (title V) Permit TV–0560–0008. The reasonable progress control analysis evaluated costs associated with the most feasible fuel switch, a change from high sulfur No. 6 fuel oil to low sulfur No. 6 fuel oil. No. 6 fuel oil is used mainly as startup/shutdown fuel in the recovery boilers; however, it can be used to supplement and stabilize steam load when the recovery boilers are burning black liquor. The analysis used the worst case scenario for SO_2 emissions, which is to assume all fuel oil is burned without black liquor, because burning a blend of fuel oil and black liquor would be expected to yield lower emissions than fuel oil firing alone. This analysis considered firing the furnace at actual fuel usage rates and at a maximum level, consistent with its existing SO_2 PSD limit. Changing from high sulfur No. 6 fuel oil to low sulfur No. 6 oil in the No. 1 recovery boiler would reduce SO_2 emissions 81 tons and cost $7,463 per ton of SO_2 removed based on the actual operating scenario and reduce SO_2 emissions 384 tons and cost $3,359 per ton of SO_2 removed at its maximum allowed operating level. Both scenarios are above SC DHEC's $2,000 per ton SO_2 emissions removed cost effectiveness threshold.

6. EPA Assessment

As noted in EPA's Reasonable Progress Guidance, the states have wide latitude to determine appropriate additional control requirements for ensuring reasonable progress, and there are many ways for a state to approach identification of additional reasonable measures. States must consider the four statutory factors, at a minimum, in determining reasonable progress, but states have flexibility in how to take these factors into consideration.

South Carolina applied the methodology developed by VISTAS for identifying appropriate sources to be considered for additional controls under reasonable progress for the implementation period ending in 2018 that is addressed by this SIP. Using this methodology, SC DHEC first identified those emissions and emissions units most likely to have an impact on visibility in the State's Class I area. Units with emissions of SO_2 with a relative contribution to visibility impairment of at least a one percent contribution at any Class I area were then subject to further analysis to determine whether it would be appropriate to require controls on these units for purposes of reasonable progress. As noted above, six units were subject to this analysis.

SC DHEC concluded, based on its evaluation of the companies' submittals, that no further controls are warranted at this time. After reviewing SC DHEC's methodology and analyses, EPA proposes to find that South Carolina's conclusion that no further controls are necessary at this time acceptable. EPA proposes to determine that South Carolina adequately evaluated the control technologies available at the time of its analysis and applicable to these types of facilities and consistently applied its criteria for reasonable compliance costs. The State included appropriate documentation in its SIP of the technical analysis it used to assess the need for and implementation of reasonable progress controls. Although the use of a specific threshold for assessing costs means that a state may not fully consider available emissions reduction measures above its threshold that would result in meaningful visibility improvement, EPA believes that the South Carolina SIP still ensures reasonable progress. In proposing to approve South Carolina's reasonable progress analysis, EPA is placing great weight on the fact that there is no indication in the SIP submittal that South Carolina, as a result of using a specific cost effectiveness threshold, rejected potential reasonable progress measures that would have had a meaningful impact on visibility in its Class I area. EPA notes that given the emissions reductions resulting from CAIR and the measures in nearby states, the visibility improvements projected for the affected Class I area are in excess of that needed to be on the uniform rate of progress.

B. Emissions Units Subject to CAIR Within AOI of Any Class I Area

Ten of the 22 emissions units identified for a reasonable progress control analysis are EGUs. These ten EGUs are subject to CAIR. To determine whether any additional controls beyond those required by CAIR would be considered reasonable for South Carolina's EGUs for this first implementation period, SC DHEC evaluated the SO_2 reductions expected from the EGU sector based upon results of the Intergrated Planning Model (IPM), as adjusted by the VISTAS states based on their knowledge of which facilities will be installing controls, to estimate the region-wide impacts of all the anticipated EGU controls, including CAIR. South Carolina determined that for EGUs, emissions reductions predicted to result from CAIR would be sufficient for ensuring reasonable progress during the first implementation period (between the baseline and 2018).

In reaching this decision, SC DHEC considered the four reasonable progress factors set forth in EPA's RHR as they apply to the State's entire EGU sector (*see* Appendix H of the South Carolina SIP and section III.C.2 of EPA's TSD for this action). In particular, the State took into account the factors of cost and time necessary for compliance in view of EPA's analysis supporting CAIR. Based on the analysis, SC DHEC concluded that additional SO_2 control measures, beyond those needed to meet CAIR requirements, for South Carolina's EGUs would not be reasonable during this first

implementation period based on a consideration of the reasonable progress statutory factors. This conclusion is bolstered by the fact that visibility improvement at the Cape Romain Wilderness Area is projected to exceed the uniform rate of progress in this first implementation period. EPA proposes to find acceptable South Carolina's methodology and determination that no additional controls beyond CAIR are reasonable for SO_2 for affected South Carolina EGUs for the first implementation period.

C. Facilities With Unit(s) Evaluated Using AirControlNET Only

SC DHEC determined that there were no cost effective controls for six non-EGU emissions units at three other facilities. As clarified in a November 9, 2009, letter from SC DHEC to EPA Region 4, the State assessed, through VISTAS, Alumax of South Carolina Units 2, 3, 4, and 5, Cogen South, and Showa Denko Carbon using AirControlNET in the initial review of affected sources for reasonable progress. (The November 2009 letter is in the docket for this action and can be accessed at *www.regulations.gov* using Docket ID No. EPA–R04–OAR–2009–0785.) Based on this assessment, SC DHEC determined that there were no available controls for these facilities that were expected to be below the $2,000 cost effectiveness threshold for non-EGUs established by SC DHEC. Thus, the State did not pursue further evaluation of the three remaining statutory factors (i.e., time necessary for compliance, energy and non-air quality environmental impacts of compliance, and remaining useful life of the emissions unit) since there were no cost-effective controls to evaluate.

6. BART

BART is an element of South Carolina's LTS for the first implementation period. The BART evaluation process consists of three components: (a) An identification of all the BART-eligible sources, (b) an assessment of whether the BART-eligible sources are subject to BART, and (c) a determination of the BART controls. These components, as addressed by SC DHEC, and SC DHEC's findings, are discussed as follows.

A. BART-Eligible Sources

The first phase of a BART evaluation is to identify all the BART-eligible sources within the state's boundaries. SC DHEC identified BART-eligible sources in South Carolina by utilizing the three eligibility criteria in the BART Guidelines (70 FR 39158) and EPA's regulations (40 CFR 51.301): (1) One or more emissions units at the facility fit within one of the 26 categories listed in the BART Guidelines; (2) the emissions units were not in operation prior to August 7, 1962, and were in existence on August 7, 1977; and (3) these units have the potential to emit 250 tons or more per year of any visibility-impairing pollutant.

The BART Guidelines also direct states to address SO_2, NO_X, and direct PM (including both PM_{10} and $PM_{2.5}$) emissions as visibility-impairment pollutants, and to exercise judgment in determining whether VOC or ammonia emissions from a source impair visibility in an area. *See* 70 FR 39160. VISTAS modeling demonstrated that VOC from anthropogenic sources are not significant visibility-impairing pollutants in South Carolina, as discussed in section IV.C.3 of this action. Regarding ammonia, the State notes in Appendix H of the SIP that analyses of spatial and temporal distributions of ammonia concentrations indicate that the primary point source ammonia contributor to regional haze at Cape Romain is likely the MeadWestvaco Plant in North Charleston, South Carolina, which is located 29 kilometers from Cape Romain. MeadWestvaco is not subject to BART because its BART-eligible units emit only approximately 130 tons per year of NH_3 and do not meet the BART eligibility threshold criteria. For this reason, South Carolina did not evaluate emissions of VOC and NH_3 in its BART determinations.

B. BART-Subject Sources

The second phase of the BART evaluation is to identify those BART-eligible sources that may reasonably be anticipated to cause or contribute to visibility impairment at any Class I area, i.e., those sources that are subject to BART. The BART Guidelines allow states to consider exempting some BART-eligible sources from further BART review because they may not reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area. Consistent with the BART Guidelines, South Carolina required each of its BART-eligible sources to develop and submit dispersion modeling to assess the extent of their contribution to visibility impairment at surrounding Class I areas.

1. Modeling Methodology

The BART Guidelines allow states to use the CALPUFF [14] modeling system (CALPUFF) or another appropriate model to predict the visibility impacts from a single source on a Class I area and therefore, to determine whether an individual source is anticipated to cause or contribute to impairment of visibility in Class I areas, i.e., ''is subject to BART.'' EPA believes that CALPUFF is the best regulatory modeling application currently available for predicting a single source's contribution to visibility impairment (70 FR 39162). South Carolina, in coordination with VISTAS, used the CALPUFF modeling system to determine whether individual sources in South Carolina were subject to BART.

The BART Guidelines also recommend that states develop a modeling protocol for making individual source attributions and suggest that states may want to consult with EPA and their RPO to address any issues prior to modeling. The VISTAS states, including South Carolina, developed a ''Protocol for the Application of CALPUFF for BART Analyses.'' Stakeholders, including EPA, FLMs, industrial sources, trade groups, and other interested parties, actively participated in the development and review of the VISTAS protocol.

The RHR gives the states significant flexibility in making decisions concerning the BART modeling analysis as part of the regional haze process. Several BART facilities located in South Carolina proposed an alternative approach from the recommendation contained in the VISTAS CALPUFF protocol to developing the sea salt concentration when using the new IMPROVE equation to calculate visibility impacts. For a few sources subject to coastal influences, the more accurate but less generally available sodium ion concentration from ambient data rather than the chloride ion concentration was used to calculate the sea salt contribution. After consultation with EPA prior to the submittal of the regional haze SIP, SC DHEC allowed the use of either the sodium ion or the chloride ion to derive the IMPROVE sea salt estimate for use in the assessment of visibility impacts to Class I areas from individual BART-subject sources for this first implementation period.

[14] Note that EPA's reference to CALPUFF encompasses the entire CALPUFF modeling system, which includes the CALMET, CALPUFF, and CALPOST models and other pre and post processors. The different versions of CALPUFF have corresponding versions of CALMET, CALPOST, etc. which may not be compatible with previous versions (e.g., the output from a newer version of CALMET may not be compatible with an older version of CALPUFF). The different versions of the CALPUFF modeling system are available from the model developer on the following Web site: *http://www.src.com/verio/download/download.htm.*

VISTAS has examined the effects of sea salt and proposed a hierarchy of methods for sea salt estimation based on a consideration of different factors that impact how technically reliable each method is for estimating sea salt in the atmosphere. (For further details, see section III.D.2 of EPA's TSD for this action and Appendices O.1 and O.3 of the South Carolina regional haze SIP revision). As a result, SC DHEC chose to accept additional information on a case-by-case basis for several BART facilities that requested a more refined approach, i.e., use of the new IMPROVE equation with sodium ion data, in their BART exemption modeling. While the use of the sodium ion derived alternative sea salt estimate would be justified for any facility modeling visibility impairment at Cape Romain, that refinement was not required if a facility exempted using chloride ion concentration. EPA proposes to find that South Carolina's approach to estimating sea salt concentration to determine visibility impacts at Cape Romain is acceptable based on the supporting technical information provided by the State in its SIP.

VISTAS developed a post-processing approach to use the new IMPROVE equation with the CALPUFF model results so that the BART analyses could consider both the old and new IMPROVE equations. SC DHEC sent a letter and a supplementary email to EPA justifying the need for this post-processing approach, and the EPA Region 4 Regional Administrator sent the State a letter of approval dated October 5, 2007. South Carolina's justification included a method to process the CALPUFF output and a rationale on the benefits of using the new IMPROVE equation. The South Carolina and EPA Region 4 letters are located in Appendix O.1 of the State's December 17, 2007, regional haze SIP submittal and can be accessed at *www.regulations.gov* using Docket ID No. EPA–R04–OAR–2009–0785.

2. Contribution Threshold

For states using modeling to determine the applicability of BART to single sources, the BART Guidelines note that the first step is to set a contribution threshold to assess whether the impact of a single source is sufficient to cause or contribute to visibility impairment at a Class I area. The BART Guidelines state that ''[a] single source that is responsible for a 1.0 deciview change or more should be considered to 'cause' visibility impairment.'' The BART Guidelines also state that ''the appropriate threshold for determining whether a source 'contributes to visibility impairment' may reasonably differ across states,'' but, ''[a]s a general matter, any threshold that you use for determining whether a source 'contributes' to visibility impairment should not be higher than 0.5 deciviews.'' The Guidelines affirm that states are free to use a lower threshold if they conclude that the location of a large number of BART-eligible sources in proximity of a Class I area justifies this approach.

South Carolina used a contribution threshold of 0.5 deciview for determining which sources are subject to BART. SC DHEC concluded that, considering the results of the visibility impacts modeling conducted, a 0.5 deciview threshold was appropriate and a lower threshold was not warranted. South Carolina demonstrated that it is unlikely that multiple BART-eligible sources would simultaneously adversely impact visibility at Cape Romain at a level that would warrant a lower threshold value. For the South Carolina sources that were shown to be impacting the Wolf Island Class I area in Georgia, South Carolina demonstrated that they were located far from Wolf Island and that the majority of the individual BART-eligible sources had visibility impacts well below 0.5 deciview. Additional details regarding South Carolina's justification for using a 0.5 deciview threshold are provided in section III.D.2 of EPA's TSD for this action. EPA is proposing to agree with South Carolina that the overall impacts of these sources are not sufficient to warrant a lower contribution threshold and that a 0.5 deciview threshold was appropriate in this instance.

3. Identification of Sources Subject to BART

South Carolina initially identified 24 facilities with BART-eligible sources. The State subsequently determined that three sources (Shaw Industries—Anderson, Solutia, Inc., and Honeywell—Clemson) are not BART-eligible because the capacities of the boilers originally identified at these facilities fall below the BART source category threshold for fossil-fuel boilers of 250 MMBtu/hr heat input. *See* 40 CFR 51.301. Table 5 lists the 21 BART-eligible sources in South Carolina.

TABLE 5—SOUTH CAROLINA'S BART-ELIGIBLE SOURCES

Albermarle Corp.
Bowater Inc. Paper/Pulp
BP Amoco Chemical—Cooper River Plant
DAK Americas
Eastman Chemical
International Paper Georgetown Mill
INVISTA—Camden Plant
INVISTA—Spartanburg Plant (formerly KOSA: Arteva)
ISG Georgetown
MeadWestvaco—Kraft Mill
Milliken Chemical—Dewey Plant
Owens Corning—Anderson
Rhodia—Charleston
Santee Cooper—Grainger
Santee Cooper—Jefferies
Santee Cooper—Winyah
SCE&G—Canadys
SCE&G—Wateree
SCE&G—Williams
Stone Container—Florence
Wellman Inc.—Palmetto Plant

Of the 21 BART-eligible sources, 19 sources demonstrated that they are not subject to BART. Seven of the 19 (Albermarle, BP Amoco Chemical—Cooper River Plant, Rhodia—Charleston, Eastman Chemical, INVISTA—Spartanburg, Owens Corning—Anderson, Milliken Chemical—Dewey) are exempt from further BART review because they are only major sources for VOC emissions. As discussed in section IV.C.3 of this action, SC DHEC determined that controlling anthropogenic sources of VOCs has little, if any, visibility benefit at Cape Romain. Twelve of the 19 (Bowater, DAK Americas, International Paper—Georgetown, INVISTA—Camden Plant, ISG Georgetown, MeadWestvaco—Kraft Mill, Santee Cooper—Jefferies, Santee Cooper—Winyah, Santee Cooper—Grainger, SCE&G—Canadys, Stone Container—Florence, Wellman—Palmetto) are not subject to BART because their modeled visibility impact is less than 0.5 deciview at the affected Class I areas. In addition, although modeling exempted them from BART, DAK Americas took an emissions limit for further assurance of their exemption. South Carolina found that two of its BART-eligible sources, SCE&G's Williams and Wateree Stations, had modeled visibility impacts of more than the 0.5 deciview threshold for BART exemption and are considered to be subject to BART. SCE&G Willams and Wateree Stations, the two BART-eligible EGUs in the State, relied on CAIR to satisfy BART for SO_2 and NO_X for its EGUs in CAIR, in accordance with 40 CFR 51.308(e)(4). Therefore, as discussed in section III.D of this action, these facilities were only required to evaluate PM emissions in their BART determinations.

Prior to the CAIR remand, the State's reliance on CAIR to satisfy BART for NO_X and SO_2 for affected CAIR EGUs was fully approvable and in accordance with 40 CFR 51.308(e)(4). However, the BART assessments for CAIR EGUs for NO_X and SO_2 and other provisions in this SIP revision are based on CAIR. In a separate action, EPA has previously proposed a limited disapproval of the South Carolina regional haze SIP because of deficiencies in the State's regional haze SIP submittal arising from the remand by the DC Circuit to EPA of CAIR. *See* 76 FR 82219. Consequently, EPA is not taking action in this proposed rulemaking to address the State's reliance on CAIR to meet certain regional haze requirements, including BART for SO_2 and NO_X emissions from EGUs.

C. BART Determinations for PM

South Carolina's two sources found subject to BART for PM (SCE&G's Wateree and Williams Stations) each submitted permit applications to the State that included their proposed BART determinations. In accordance with the BART Guidelines, to determine the level of control that represents BART for each source, the State first reviewed existing controls on these units to assess whether these constituted the best controls currently available, then identified what other technically feasible controls are available, and finally, evaluated the technically feasible controls using the five BART statutory factors. The State's evaluations and conclusions, and EPA's assessment, are summarized below.

1. SCE&G Wateree

SCE&G Wateree Station is located in Eastover, South Carolina. The station consists of two identical pulverized coal-fired, wet bottom boilers (Units 1 and 2). The two boilers produce superheated steam, which is used in the two dedicated turbine generators. Units 1 and 2 are equipped with fabric filter baghouses to control PM emissions, and low-NO_X burners and selective catalytic reduction (SCR) to control NO_X emissions. Although Units 1 and 2 commenced commercial operation in the early 1970s, there is no near-term limitation on the useful life of these units.

SCE&G also installed two wet limestone scrubbers to control SO_2 emissions in the summer of 2009. Wateree Station Units 1 and 2 were retrofit with FGD systems using limestone slurry in a spray tower to remove SO_2 from the gas stream. Although designed to control SO_2 emissions, the FGD systems provide the added benefit of removing sulfates, a principal constituent of condensable PM_{10}. The operation of the FGD systems is projected to reduce visibility impacts to well below the State's 0.5 deciview BART contribution threshold.

To address the BART requirement, SCE&G prepared an analysis of several additional options for PM_{10} addressing the statutory factors. The cost effectiveness of the various options ranged from $11,238 to $19,056 per ton of PM_{10} removed with a projected additional visibility improvement of approximately 0.04–0.05 deciview at Cape Romain. SC DHEC determined that the additional annualized costs associated with additional PM_{10} control options were excessive and that no additional control measures were cost effective.

2. SCE&G Williams

SCE&G Williams Station is located in Goose Creek, South Carolina. The station consists of a single pulverized coal-fired, dry bottom boiler (Unit 1). The boiler produces superheated steam, which is used in a turbine generator. Although Unit 1 commenced commercial operation in 1973, there is no near-term limitation on the useful life of this unit.

Unit 1 is currently equipped with low-NO_X burners and SCR to control NO_X emissions and an electrostatic precipitator to control PM_{10} emissions, the latter of which has been demonstrated to achieve performance levels comparable to those being specified as best achievable control technology for new coal-fired boilers. The existing control device, therefore, is considered representative of BART for PM_{10}. To address the BART requirement, SCE&G evaluated several additional options for control of PM_{10} and addressed the statutory factors. The cost effectiveness of the various options ranged from $307,420 to $376,318 per ton of PM_{10} removed with a projected visibility improvement of less than 0.01 deciview. SC DHEC determined that the additional annualized costs associated with additional PM_{10} control options were excessive and that no additional control measures were cost effective.

In October 2009, SCE&G retrofitted Williams Station Unit 1 with a FGD system using limestone slurry in a spray tower to remove SO_2 from the gas stream. Although designed to control SO_2 emissions, the FGD system will provide the added benefit of removing sulfates, a principal constituent of condensable PM_{10}. PM_{10} emissions will be reduced from 925 tons per year to 464 tons per year following the installation of the FGD system. This 50 percent reduction is attributable to the removal of condensable PM_{10}, principally sulfates, in the FGD system. After the installation of the FGD system, the modeled 98th percentile deciview visibility impact from this facility will be reduced by 0.69 deciview at Cape Romain.

3. EPA Assessment

EPA proposes to agree with South Carolina's analyses and conclusions for the BART emissions units located at these facilities. EPA has reviewed the South Carolina analyses and proposes to conclude that they were conducted in a manner that is consistent with EPA's BART Guidelines and EPA's *Air Pollution Control Cost Manual* (*http://www.epa.gov/ttncatc1/products.html#cccinfo*). Therefore, EPA

proposes to find that the conclusions reflect a reasonable application of EPA's guidance to these sources.

7. RPGs

The RHR at 40 CFR 51.308(d)(1) requires states to establish RPGs for each Class I area within the state (expressed in deciviews) that provide for reasonable progress towards achieving natural visibility. VISTAS modeled visibility improvements under existing Federal and state regulations for the period 2004–2018, and additional control measures which the VISTAS states planned to implement in the first implementation period. At the time of VISTAS modeling, some of the other states with sources potentially impacting visibility at the South Carolina Class I area had not yet made final control determinations for BART and/or reasonable progress, and thus, these controls were not included in the modeling submitted by South Carolina. Any controls resulting from those determinations will provide additional emissions reductions and resulting visibility improvement, which give further assurances that South Carolina will achieve its RPGs. This modeling demonstrates that the 2018 base control scenario provides for an improvement in visibility better than the uniform rate of progress for Cape Romain for the most impaired days over the period of the implementation plan and ensures no degradation in visibility for the least impaired days over the same period.

As shown in Table 6 below, South Carolina's RPGs for the 20 percent worst days provide greater visibility improvement by 2018 than the uniform rate of progress for the State's Class I area (i.e., 22.7 deciviews in 2018). Also, the RPGs for the 20 percent best days provide greater visibility improvement by 2018 than current best day conditions. The regional haze provisions specify that a state may not adopt a RPG that represents less visibility improvement than is expected to result from other CAA requirements during the implementation period. 40 CFR 51.308(d)(1)(vi). Therefore, the CAIR states with Class I areas, like South Carolina, took into account emissions reductions anticipated from CAIR in determining their 2018 RPGs.[15] The modeling supporting the analysis of these RPGs is consistent with EPA guidance at the time.

TABLE 6—SOUTH CAROLINA 2018 RPGS

[In deciviews]

Class I area	Baseline visibility—20% worst days	2018 RPG—20% worst days (improvement from baseline)	Uniform rate of progress at 2018—20% worst days	Baseline visibility—20% best days	2018 RPG—20% best days (improvement from baseline)
Cape Romain	26.5	22.7 (3.8)	23.2	14.2	12.7 (1.5)

The RPGs for the Class I area in South Carolina are based on modeled projections of future conditions that were developed using the best available information at the time the analysis was done. These projections can be expected to change as additional information regarding future conditions becomes available. For example, new sources may be built, existing sources may shut down or modify production in response to changed economic circumstances, and facilities may change their emissions characteristics as they install control equipment to comply with new rules. It would be both impractical and resource-intensive to require a state to continually revise its RPGs every time an event affecting these future projections changed.

EPA recognized the problems of a rigid requirement to meet a long-term goal based on modeled projections of future visibility conditions, and addressed the uncertainties associated with RPGs in several ways. EPA made clear in the RHR that the RPG is not a mandatory standard which must be achieved by a particular date. *See* 64 FR at 35733. At the same time, EPA established a requirement for a midcourse review and, if necessary, correction of the states' regional haze plans. *See* 40 CFR 52.308(g). In particular, the RHR calls for a five-year progress review after submittal of the initial regional haze plan. The purpose of this progress review is to assess the effectiveness of emissions management strategies in meeting the RPG and to provide an assessment of whether current implementation strategies are sufficient for the state or affected states to meet their RPGs. If a state concludes, based on its assessment, that the RPGs for a Class I area will not be met, the RHR requires the state to take appropriate action. *See* 40 CFR 52.308(h). The nature of the appropriate action will depend on the basis for the state's conclusion that the current strategies are insufficient to meet the RPGs. South Carolina specifically committed to follow this process in its submittal. Accordingly, EPA proposes to approve South Carolina's RPGs for the Cape Romain Class I Area.

D. Coordination of RAVI and Regional Haze Requirements

EPA's visibility regulations direct states to coordinate their RAVI LTS and monitoring provisions with those for regional haze, as explained in sections III.F and III.G of this action. Under EPA's RAVI regulations, the RAVI portion of a state SIP must address any integral vistas identified by the FLMs pursuant to 40 CFR 51.304. *See* 40 CFR 51.302. An *integral vista* is defined in 40 CFR 51.301 as a ''view perceived from within the mandatory Class I federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I federal area.'' Visibility in any mandatory Class I area includes any integral vista associated with that area. The FLMs did not identify any integral vistas in South Carolina. In addition, the Class I area in South Carolina is not experiencing RAVI, nor are any of its sources affected by the RAVI provisions. Thus, the December 17, 2007, South Carolina regional haze SIP submittal does not explicitly address the two requirements regarding coordination of the regional haze with the RAVI LTS and monitoring provisions. South Carolina has, however, previously made a commitment to address RAVI should the FLM certify visibility impairment from an individual source.[16] EPA

[15] Many of the CAIR states without Class I areas similarly relied on CAIR emissions reductions within the state to address some or all of their contribution to visibility impairment in other states' Class I areas, which the impacted Class I area state(s) used to set the RPGs for their Class I area(s). Certain surrounding non-CAIR states also relied on reductions due to CAIR in nearby states to develop their regional haze SIP submittals.

[16] South Carolina submitted its visibility SIP revisions addressing RAVI on June 3, 1985, which EPA approved on January 21, 1986 (51 FR 2698).

proposes to find that this regional haze submittal appropriately supplements and augments South Carolina's RAVI visibility provisions to address regional haze by updating the monitoring and LTS provisions as summarized below in this section.

In the December 17, 2007, submittal, SC DHEC updated its visibility monitoring program and developed a LTS to address regional haze. Also in this submittal, SC DHEC affirmed its commitment to complete items required in the future under EPA's RHR. Specifically, SC DHEC made a commitment to review and revise its regional haze implementation plan and submit a plan revision to EPA by July 31, 2018, and every 10 years thereafter. *See* 40 CFR 51.308(f). In accordance with the requirements listed in 40 CFR 51.308(g) of EPA's regional haze regulations and 40 CFR 51.306(c) of the RAVI LTS regulations, SC DHEC made a commitment to submitting a report to EPA on progress towards the RPGs the mandatory Class I area located within South Carolina and in each mandatory Class I area located outside South Carolina which may be affected by emissions from within South Carolina. The progress report is required to be in the form of a SIP revision and is due every five years following the initial submittal of the regional haze SIP. *See* 40 CFR 51.308(g). Consistent with EPA's monitoring regulations for RAVI and regional haze, South Carolina will rely on the IMPROVE network for compliance purposes, in addition to any RAVI monitoring that may be needed in the future. *See* 40 CFR 51.305, 40 CFR 51.308(d)(4). Also, the South Carolina new source review rules, previously approved in the State's SIP, continue to provide a framework for review and coordination with the FLMs on new sources which may have an adverse impact on visibility in either form (i.e., RAVI and/or regional haze) in any Class I area.

The original South Carolina visibility SIP submitted to EPA June 3, 1985, addressing the monitoring and LTS requirements in 40 CFR 51.305 and 40 CFR 51.306, respectively, was supplemented by an EPA regulation, 40 CFR 52.2132, on July 12, 1985 (50 FR 28544), as amended on November 24, 1987 (52 FR 45132). The 1985 and 1987 EPA actions incorporate 40 CFR 52.26 and 40 CFR 52.29 into the South Carolina SIP and continue to be in effect. Because the December 17, 2007, regional haze submittal appropriately addresses the monitoring and LTS requirements in 40 CFR 51.305 and 40 CFR 51.306, and supersedes these previous requirements, EPA is proposing to rescind the Federal regulations in 40 CFR 52.2132 and rely on the provisions in this December 17, 2007, submittal to meet these requirements.

E. Monitoring Strategy and Other Implementation Plan Requirements

The primary monitoring network for regional haze in South Carolina is the IMPROVE network. As discussed in section IV.B.2 of this action, there is currently one IMPROVE site in South Carolina, which serves as the monitoring site for Cape Romain (ROMA1).

IMPROVE monitoring data from 2000–2004 serves as the baseline for the regional haze program and is relied upon in the December 17, 2007, regional haze submittal. In the submittal, South Carolina states its intention to rely on the IMPROVE network for complying with the regional haze monitoring requirement in EPA's RHR for the current and future regional haze implementation periods.

Data produced by the IMPROVE monitoring network will be used nearly continuously for preparing the five-year progress reports and the 10-year SIP revisions, each of which relies on analysis of the preceding five years of data. The Visibility Information Exchange Web System (VIEWS) web site has been maintained by VISTAS and the other RPOs to provide ready access to the IMPROVE data and data analysis tools. South Carolina is encouraging VISTAS and the other RPOs to maintain the VIEWS or a similar data management system to facilitate analysis of the IMPROVE data.

In addition to the IMPROVE measurements, the State supplements the IMPROVE sampling by operating additional co-located monitoring. Monitoring at Cape Romain includes:

- A tapered element oscillating microbalance for continuously measuring $PM_{2.5}$ mass concentration;
- An aethalometer for continuously measuring black carbon;
- An integrating nephelometer, supported by VISTAS, for continuously measuring light scattering; and
- Continuous monitoring of NO_2 and SO_2 precursor gasses.

Additional haze-related measurements were taken in South Carolina in 2002–2005 as part of special monitoring studies by VISTAS to better understand source contributions to $PM_{2.5}$ mass and visibility. These studies included: continuous monitoring of sulfate, nitrate, and carbon to better understand daily trends in $PM_{2.5}$; detailed analyses of carbon collected on high volume filters to identify source contributions to carbon; and additional analyses of sodium and ammonium on IMPROVE filter samples. VISTAS does not have the funding to continue these special studies and has therefore transferred the equipment to SC DHEC. South Carolina has also acquired several continuous sulfate monitors and expects to operate them at urban and rural sites to further the understanding of both $PM_{2.5}$ and visibility formation and trends in the State. SC DHEC will operate the units discussed above as long as funds allow. In addition, SC DHEC operates a comprehensive $PM_{2.5}$ network of filter-based Federal reference method monitors, continuous mass monitors, filter-based speciated monitors, and continuous speciated monitors.

F. Consultation With States and FLMs

1. Consultation With Other States

In December 2006 and in May 2007, the State Air Directors from the VISTAS states held formal interstate consultation meetings. The purpose of the meetings was to discuss the methodology proposed by VISTAS for identifying sources to evaluate for reasonable progress. The states invited FLM and EPA representatives to participate and to provide additional feedback. The Directors discussed the results of analyses showing contributions to visibility impairment from states to each of the Class I areas in the VISTAS region.

SC DHEC has evaluated the impact of South Carolina sources on Class I areas in neighboring states. The state in which a Class I area is located is responsible for determining which sources, both inside and outside of that state, to evaluate for reasonable progress controls. Because many of these states had not yet defined their criteria for identifying sources to evaluate for reasonable progress, South Carolina applied its AOI methodology to identify sources in the State that have emissions units with impacts large enough to potentially warrant further evaluation and analysis. The State identified seven emissions units at three facilities in South Carolina with a contribution of one percent or more to the visibility impairment at the following five Class I areas in two neighboring states: Wolf Island Wilderness Area and Okefenokee Wilderness Area in Georgia; and Joyce Kilmer, Shining Rock, and Swanquarter Wilderness Areas in North Carolina.

Georgia and North Carolina submitted letters to South Carolina requesting that the State consider adding several of its sources' emissions units to the SC DHEC's final reasonable progress

control analysis list of facilities so as to account for those facilities that Georgia believes are likely to contribute more than 0.5 percent, and North Carolina believes are likely to contribute more than one percent, to the total visibility impairment at one or more Class I areas in these states, respectively. In its response to this request, SC DHEC provided Georgia and North Carolina with a list of sources identified as likely to contribute one percent or more to visibility impairment in South Carolina and a justification as to why or why not each facility would be included in South Carolina's final reasonable progress control analysis list of facilities. South Carolina provided initial results for several of its reasonable progress control evaluations to both states. SC DHEC also notified Georgia that four of the facilities identified by Georgia in its letter were either below the 0.5 percent contribution threshold used by Georgia or did not meet South Carolina's cost effectiveness threshold for additional controls. The remaining facilities are addressed by CAIR. Based on an evaluation of the four reasonable progress statutory factors, South Carolina determined that there are no additional control measures for these South Carolina emissions units that would be reasonable to implement to mitigate visibility impacts in Class I areas in these neighboring states. SC DHEC has consulted with these states regarding its reasonable progress control evaluations showing that no additional cost-effective controls are available for those emissions units in South Carolina contributing at least one percent to visibility impairment at Class I areas in the states. The documentation for these formal consultations is provided in Appendix J of South Carolina's SIP.

Regarding the impact of sources outside of the State on the Class I area in South Carolina, SC DHEC sent a letter to Georgia identifying two emissions units in that State that South Carolina believes contributed one percent or higher to visibility impairment at Cape Romain. At that time, Georgia was still in the process of evaluating BART and reasonable progress for its sources. Any controls resulting from those determinations will provide additional emissions reductions and resulting visibility improvement, which gives further assurances that South Carolina will achieve its RPGs. Therefore, to be conservative, South Carolina opted not to rely on any additional emissions reductions from sources located outside the State's boundaries beyond those already identified in the State's regional haze SIP submittal and as discussed in section IV.C.1 of this action.

South Carolina also received letters from the Mid-Atlantic/Northeast Visibility Union (MANE–VU) RPO States of New Jersey and New Hampshire in the spring of 2007, stating that based on MANE–VU's analysis of 2002 emissions data, South Carolina contributed to visibility impairment to Class I areas in those states. The MANE–VU states asked South Carolina to participate in further consultation with MANE–VU during the summer of 2007. SC DHEC sent response letters to both states and expressed its intent to consult with them through VISTAS representatives. SC DHEC also explained in its responses that VISTAS has conducted assessments for the VISTAS states to help predict the influence of emissions from the VISTAS region on visibility at Class I areas in and near the VISTAS region. This work took into account the latest data and information available, including the reductions from CAA and state programs that will be in effect in 2018. SC DHEC notified New Jersey and New Hampshire that these assessments do not indicate that South Carolina facility emissions have an impact on visibility at any Class I area outside of the VISTAS region, and that SC DHEC thus concluded that emissions from South Carolina do not reasonably contribute to visibility impairment at these States' areas. EPA proposes to find that South Carolina has adequately addressed the consultation requirements in the RHR and appropriately documented its consultation with other states in its SIP submittal.

2. Consultation With the FLMs

Through the VISTAS RPO, South Carolina and the nine other member states worked extensively with the FLMs from the U.S. Departments of the Interior and Agriculture to develop technical analyses that support the regional haze SIPs for the VISTAS states. South Carolina provided a draft regional haze plan to the FLMs and EPA for early input in the August to September 2007 time period. The proposed regional haze plan for South Carolina was out for public comment from October 26, 2007, until December 12, 2007.

The FLMs submitted comments on the August 17, 2007, draft SIP provided by the State to the FLMs and EPA for initial consultation prior to the public comment period. The October 9, 2007, letter from the U.S. Fish & Wildlife Service (FWS) noted that the draft SIP should provide discussion or justifications for modifications made to the new IMPROVE equation for determining which BART-eligible sources are contributing to visibility impairment at any Class I area. Additionally, FWS indicated that the modifications to the new IMPROVE equation did not appear to be applied consistently throughout the regional haze analyses and needed further explanation. The FWS recommended that the SIP provide information that indicates that EPA has approved these modifications. The FWS also identified several appendices that were not included in the draft SIP, including the appendix that addresses reasonable progress, BART, and the LTS. The FWS also recommended that the State include its smoke management plan in the SIP. The FWS suggested that the State add discussion of South Carolina's evaluation of impacts to Class I areas outside of the State to the narrative that was in an appendix, and made several other recommendations to provide more detail or to clarify technical discussions in the SIP. South Carolina responded to the comments and subsequently modified the plan to address comments received on this initial version of the State's regional haze SIP. South Carolina included extensive discussion and documentation in both the SIP narrative and appendices to explain the refinements to the IMPROVE equation that BART-eligible sources could use, including the alternative approach to the recommendation contained in the VISTAS CALPUFF protocol using the sodium ion concentration to develop the sea salt concentration when using the new IMPROVE equation to calculate visibility impacts. The State also provided the missing appendices to the FLMs on September 28, 2007, and added two other appendices on November 21, 2007. SC DHEC made the requested clarifications to the SIP. Instead of including the State's smoke management plan, SC DHEC explained the reasons that the MOU with SCFC is included instead, with references to the smoke management plan. To address the requirement for continuing consultation procedures with the FLMs under 40 CFR 51.308(i)(4), SC DHEC made a commitment in the SIP to ongoing consultation with the FLMs on regional haze issues throughout implementation of its plan, including annual discussions.

G. Periodic SIP Revisions and Five-Year Progress Reports

As also summarized in section IV.D of this action, consistent with 40 CFR 51.308(g), SC DHEC affirmed its commitment to submitting a progress report in the form of a SIP revision to

EPA every five years following this initial submittal of the South Carolina regional haze SIP. The report will evaluate the progress made towards the RPGs for the mandatory Class I area located within South Carolina and in each mandatory Class I area located outside South Carolina which may be affected by emissions from within South Carolina. South Carolina also offered recommendations for several technical improvements that, as funding allows, can support the State's next LTS. These recommendations are discussed in detail in the South Carolina submittal in Appendix K.

If another state's regional haze SIP identifies that South Carolina's SIP needs to be supplemented or modified, and if, after appropriate consultation and South Carolina agrees, today's action may be revisited, or additional information and/or changes will be addressed in the five-year progress report SIP revision.

V. What action is EPA taking?

EPA is proposing a limited approval of a revision to the South Carolina SIP submitted by the State of South Carolina on December 17, 2007, as meeting some of the applicable regional haze requirements as set forth in sections 169A and 169B of the CAA and in 40 CFR 51.300–308, as described previously in this action. Also in this action, EPA is proposing to rescind the Federal regulations in 40 CFR 52.2132 that were approved into the South Carolina SIP on July 12, 1985, and November 24, 1987, and to rely on the provisions in South Carolina's December 17, 2007, SIP revision to meet the monitoring and LTS requirements for RAVI.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order 12866, entitled ''Regulatory Planning and Review.''

B. Paperwork Reduction Act

Under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.,* OMB must approve all ''collections of information'' by EPA. The Act defines ''collection of information'' as a requirement for answers to * * * identical reporting or recordkeeping requirements imposed on ten or more persons * * *. 44 U.S.C. 3502(3)(A). The Paperwork Reduction Act does not apply to this action.

C. Regulatory Flexibility Act (RFA)

The RFA generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements 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 not-for-profit enterprises, and small governmental jurisdictions.

This rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the CAA do not create any new requirements but simply approve requirements that the state is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities.

Moreover, due to the nature of the Federal-state relationship under the CAA, preparation of a flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The CAA forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *EPA,* 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

D. Unfunded Mandates Reform Act (UMRA)

Under section 202 of the UMRA of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to the private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that today's proposal does not include a Federal mandate that may result in estimated costs of $100 million or more to either state, local, or tribal governments in the aggregate, or to the private sector. This Federal action proposes to approve pre-existing requirements under state or local law, and imposes no new requirements. Accordingly, no additional costs to state, local, or tribal governments, or to the private sector, result from this action.

E. Executive Order 13132, Federalism

Federalism (64 FR 43255, August 10, 1999) revokes and replaces Executive Orders 12612 (Federalism) and 12875 (Enhancing the Intergovernmental Partnership). Executive Order 13132 requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that 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.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by state and local governments, or EPA consults with state and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts state law unless the Agency consults with state and local officials early in the process of developing the proposed regulation.

This rule 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, because it merely approves a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the CAA. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

F. Executive Order 13175, Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' Consistent with the EPA

Policy on Consultation and Coordination with Indian Tribes, EPA complies with this Executive Order through the process of tribal consultation. With respect to today's action, EPA has offered the Catawba Indian Nation two opportunities to consult.[17] First, in an email dated October 21, 2010, EPA extended the Catawba Indian Nation an opportunity to consult, however, the Tribe declined to consult with EPA at that time. Due to the passage of time between the initial offer of consultation and today's proposed action, EPA provided the Catawba Indian Nation a second opportunity to consult on the South Carolina Regional Haze SIP revision on February 1, 2012. In an email dated February 8, 2012, the Catawba Indian Nation stated that no consultation on this pending action was needed by the Tribe. Further, EPA has no information to suggest that today's action will impose substantial direct costs on tribal governments or preempt tribal law.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to Executive Order 13045 because it does not involve decisions intended to mitigate environmental health or safety risks.

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

This rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

Section 12 of the NTTAA of 1995 requires Federal agencies to evaluate existing technical standards when developing a new regulation. To comply with NTTAA, EPA must consider and use ''voluntary consensus standards'' (VCS) if available and applicable when developing programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical.

EPA believes that VCS are inapplicable to this action. Today's action does not require the public to perform activities conducive to the use of VCS.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen oxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxide, Volatile organic compounds.

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

Dated: February 15, 2012.

A. Stanley Meiburg,

Acting Regional Administrator, Region 4.

[FR Doc. 2012–4680 Filed 2–27–12; 8:45 am]

BILLING CODE 6560–50–P

[17] The Catawba Indian Nation Reservation is located within the South Carolina. Generally, SIPs do not apply in Indian country throughout the United States, however, for purposes of the Catawba Indian Nation Reservation in Rock Hill, the South Carolina SIP does apply within the Reservation pursuant to the Catawba Indian Claims Settlement Act, S.C. Code Ann. 27–16–120 (providing that ''all state and local environmental laws and regulations apply to the [Catawba Indian Nation] and Reservation and are fully enforceable by all relevant state and local agencies and authorities.'')

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R01–OAR–2009–0689; A–1–FRL–9638–7]

Approval and Promulgation of Air Quality Implementation Plans; Vermont; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing approval of a revision to the Vermont State Implementation Plan (SIP) submitted by the Vermont Department of Environmental Conservation (VT DEC) on August 26, 2009, with a supplemental submittal on January 3, 2012, that addresses regional haze for the first planning period from 2008 through 2018. This revision addresses the requirements of the Clean Air Act (CAA) and EPA's rules that require States to prevent any future, and remedy any existing, manmade impairment of visibility in mandatory Class I areas (also referred to as the ''regional haze program''). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas.

DATES: Written comments must be received on or before March 29, 2012.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R01–OAR–2009–0689 by one of the following methods:

1. *www.regulations.gov:* Follow the on-line instructions for submitting comments.
2. *Email: arnold.anne@epa.gov.*
3. *Fax:* (617) 918–0047.
4. *Mail:* ''Docket Identification Number EPA–R01–OAR–2009–0631,'' Anne Arnold, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, (Mail code OEP05–2), Boston, MA 02109–3912.
5. Hand Delivery or Courier. *Deliver your comments to:* Anne Arnold, Manager, Air Quality Planning Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, (mail code OEP05–2), Boston, MA 02109–3912. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding legal holidays.

Instructions: Direct your comments to Docket ID No. EPA–R01–OAR–2009–0689. 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,* 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 through *www.regulations.gov,* or email, information that you consider to be CBI or otherwise protected. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means 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 EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public