

**FOR FURTHER INFORMATION CONTACT:**

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**SUPPLEMENTARY INFORMATION:****I. Background**

In the **Federal Register** of July 9, 2009 (74 FR 33030), FDA issued a final rule requiring shell egg producers to implement measures to prevent *Salmonella* Enteritidis (SE) from contaminating eggs on the farm and from further growth during storage and transportation, and requiring these producers to maintain records concerning their compliance with the final rule and to register with FDA. This final rule became effective September 8, 2009, with a compliance date of July 9, 2010, for producers with 50,000 or more laying hens. For producers with fewer than 50,000, but at least 3,000 laying hens, the compliance date is July 9, 2012. The compliance date for persons who must comply with only the refrigeration requirements was July 9, 2010.

This level 1 draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the Agency's current thinking on how to interpret the requirements in the final rule, including questions and answers on compliance dates; coverage; definitions; SE prevention measures; sampling and testing for SE; registration; and compliance and enforcement. It does not create or confer any rights for or on any person and does not operate to bind FDA or the public. An alternate approach may be used if such approach satisfies the requirements of the applicable statutes and regulations.

**II. Paperwork Reduction Act of 1995**

This draft guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). The collections of information in 21 CFR 118.5, 118.6, 118.10, and 118.11 have been approved under OMB control number 0910-0660.

**III. Comments**

Interested persons may submit to the Division of Dockets Management (see **ADDRESSES**) either electronic or written comments regarding this document. It is only necessary to send one set of comments. It is no longer necessary to

send two copies of mailed comments. Identify comments with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

**IV. Electronic Access**

Persons with access to the Internet may obtain the draft guidance at <http://www.fda.gov/RegulatoryInformation/Guidances/default.htm> or <http://www.regulations.gov>.

Dated: July 7, 2011.

**Leslie Kux,**

*Acting Assistant Commissioner for Policy.*

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

[EPA-R03-OAR-2011-0092; FRL-9437-1]

**Approval and Promulgation of Air Quality Implementation Plans; West Virginia; Regional Haze State Implementation Plan**

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

**ACTION:** Proposed rule.

**SUMMARY:** EPA is proposing a limited approval and a limited disapproval of a revision to the West Virginia State Implementation Plan (SIP) submitted by the State of West Virginia through the West Virginia Department of Environmental Protection (WVDEP) on June 18, 2008, that addresses regional haze for the first implementation period. 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, anthropogenic impairment of visibility in mandatory Class I 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 West Virginia on the basis that the revision, as a whole, strengthens the West Virginia SIP. Also in this action, EPA is proposing a limited disapproval of this same SIP revision because of the deficiencies in

the State's June 2008 regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). EPA is also proposing to approve this revision as meeting the requirements of 110(a)(2)(D)(i)(II) and 110(a)(2)(J), relating to visibility protection for the 1997 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) and the 1997 and 2006 fine particulate matter (PM<sub>2.5</sub>) NAAQS.

**DATES:** Comments must be received on or before August 12, 2011.

**ADDRESSES:** Submit your comments, identified by Docket ID Number EPA-R03-OAR-2011-0092 by one of the following methods

A. <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.

B. *E-mail:*  
[fernandez.cristina@epa.gov](mailto:fernandez.cristina@epa.gov).

C. *Mail:* EPA-R03-OAR-2011-0092, Cristina Fernandez, Associate Director, Office of Air Program Planning, Mailcode 3AP30, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

D. *Hand Delivery:* At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

**Instructions:** Direct your comments to Docket ID No. EPA-R03-OAR-2011-0092. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or e-mail. The <http://www.regulations.gov> website 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 e-mail comment directly to EPA without going through <http://www.regulations.gov>, your e-mail 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.

**Docket:** All documents in the electronic docket are listed in the <http://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 <http://www.regulations.gov> or in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the State submittal are available at the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street SE., Charleston, West Virginia 25304.

**FOR FURTHER INFORMATION CONTACT:** Melissa Linden, (215) 814-2096, or by e-mail at [linden.melissa@epa.gov](mailto:linden.melissa@epa.gov).

**SUPPLEMENTARY INFORMATION:** On June 18, 2008, the WVDEP submitted a revision to its SIP for Regional Haze.

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Throughout this document, whenever "we," "us," or "our" is used, we mean EPA.

## I. What action is EPA proposing to take?

EPA is proposing a limited approval of West Virginia's June 18, 2008 SIP revision addressing regional haze because the revision as a whole strengthens the West Virginia SIP. EPA is also proposing to find that this revision meets the applicable visibility related requirements of CAA Section 110(a)(2) including, but not limited to 110(a)(2)(D)(i)(II) and 110(a)(2)(J), relating to visibility protection for the 1997 8-Hour Ozone NAAQS and the 1997 and 2006 PM<sub>2.5</sub> NAAQS. However, the West Virginia SIP relies on CAIR, an EPA rule, to satisfy key elements of the regional haze requirements. Due to the remand of CAIR, *see North Carolina v. EPA*, 531 F.3d 836 (DC Circuit 2008), the revision does not meet all of the applicable requirements of the CAA and EPA's regulations as set forth in sections 169A and 169B of the CAA and in 40 CFR 51.300-308. As a result, EPA is concurrently proposing a limited

disapproval of West Virginia's SIP revision. The revision nevertheless represents an improvement over the current SIP, and makes considerable progress in fulfilling the applicable CAA regional haze program requirements. This proposed rulemaking explains the basis for EPA's proposed limited approval and limited disapproval actions.

Under the 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>. The deficiencies that EPA has identified as preventing a full approval of this SIP revision relate to the status and impact of CAIR on certain interrelated and required elements of the regional haze program. At the time the West Virginia regional haze SIP was being developed, the State's reliance on CAIR was fully consistent with EPA's regulations, *see* (70 FR 39104, 39142-4143, July 6, 2005). CAIR, as originally promulgated, requires significant reductions in emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) to limit the interstate transport of these pollutants, and the reliance on CAIR by affected states as an alternative to requiring BART for electrical generating units (EGUs) had specifically been upheld in *Utility Air Regulatory Group v. EPA*, 471 F.3d 1333 (DC Circuit 2006). In 2008, however, the DC Circuit remanded CAIR back to EPA. *See North Carolina v. EPA*, 550 F.3d 1176. The court found CAIR to be inconsistent with the requirements of the CAA, *see North Carolina v. EPA*, 531 F.3d 896 (DC Circuit 2008), but ultimately remanded the rule to EPA without vacatur because it found that "allowing CAIR to remain in effect until it is replaced by a rule consistent with [the court's] opinion would at least temporarily preserve the environmental values covered by CAIR." *See North Carolina v. EPA*, 550 F.3d at 1178. In response to the court's decision, EPA has proposed a new rule to address interstate transport of NO<sub>x</sub> and SO<sub>x</sub> in the eastern United States. (75 FR 45210, Aug. 2, 2010) ("the Transport Rule"). EPA explained in that proposal that the Transport Rule, when finalized, will

replace CAIR and the CAIR Federal Implementation Plans (FIPs). In other words, the CAIR and CAIR FIP requirements, which were found to be illegal by the DC Circuit, will not remain in force after the Transport Rule requirements are in place. Given the status of CAIR, EPA is proposing to find that West Virginia may not rely on CAIR in its present form to provide reductions to satisfy the reasonable progress and BART requirements of the regional haze program.

While CAIR will not remain in effect indefinitely, it is currently in force. *See North Carolina v. EPA*, 550 F.3d 1176. By granting limited approval of West Virginia's regional haze SIP, EPA will allow the State to rely on the emissions reductions associated with CAIR for so long as CAIR is in place. We believe that this course of action is consistent with the court's intention to keep CAIR in place in order to "temporarily preserve the environmental values covered by CAIR." *Id.* at 1178.

## 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 PM<sub>2.5</sub> (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), and their precursors (e.g., SO<sub>2</sub>, NO<sub>x</sub>, and in some cases, ammonia (NH<sub>3</sub>) and volatile organic compounds (VOC)). Fine particle precursors react in the atmosphere to form fine particulate matter that impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. PM<sub>2.5</sub> can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range<sup>1</sup> in many Class I areas (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. (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 Federal areas<sup>2</sup> which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, i.e., "reasonably attributable visibility impairment." *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

<sup>2</sup> Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. (44 FR 69122, November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Federal Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

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.<sup>3</sup> 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

<sup>3</sup> 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).

<sup>1</sup> Visual range is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky.

Virginia, and the Eastern Band of the Cherokee Indians.

#### *D. Interstate Transport for Visibility*

Sections 110(a)(1) and 110(a)(2)(D)(i)(II) of the CAA require that within three years of promulgation of a NAAQS, a State must ensure that its SIP, among other requirements, “contains adequate provisions prohibiting any source or other types of emission activity within the State from emitting any air pollutant in amounts which will interfere with measures required to be included in the applicable implementation plan for any other State to protect visibility.” Similarly, section 110(a)(2)(f) requires that such SIP “meet the applicable requirements of part C of (Subchapter I) (relating to visibility protection).”

EPA’s 2006 Guidance, entitled “Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards,” recognized the possibility that a state could potentially meet the visibility portions of section 110(a)(2)(D)(i)(II) through its submission of a Regional Haze SIP, as required by sections 169A and 169B of the CAA. EPA’s 2009 guidance, entitled “Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24-Hour Fine Particle (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS),” recommended that a state could meet such visibility requirements through its Regional Haze SIP. EPA’s rationale supporting this recommendation was that the development of the regional haze SIPs was intended to occur in a collaborative environment among the states, and that through this process states would coordinate on emissions controls to protect visibility on an interstate basis. The common understanding was that, as a result of this collaborative environment, each state would take action to achieve the emissions reductions relied upon by other states in their reasonable progress demonstrations under the Regional Haze Rule. This interpretation is consistent with the requirement in the Regional Haze Rule that a state participating in a regional planning process must include “all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.” 40 CFR 51.308(d)(3)(ii).

The regional haze program, as reflected in the Regional Haze Rule, recognizes the importance of addressing the long-range transport of pollutants for visibility and encourages states to work

together to develop plans to address haze. The regulations explicitly require each state to address its share of the emission reductions needed to meet the reasonable progress goals for neighboring Class I areas. States working together through a regional planning process, are required to address an agreed upon share of their contribution to visibility impairment in the Class I areas of their neighbors. 40 CFR 51.308(d)(3)(ii). Given these requirements, appropriate regional haze SIPs will contain measures that will achieve these emissions reductions and will meet the applicable visibility related requirements of section 110(a)(2).

As a result of the regional planning efforts in the VISTAS, all states in the VISTAS region contributed information used in the analysis of the causes of haze, and the levels of contribution from all sources within each state to the visibility degradation of each Class I area. The VISTAS States consulted in the development of reasonable progress goals. The modeling done by VISTAS relied on assumptions regarding emissions over the relevant planning period and embedded in these assumptions were anticipated emissions reductions in each of the states in VISTAS, including reductions from BART and other measures to be adopted as part of the State’s long term strategy for addressing regional haze. The reasonable progress goals in the regional haze SIPs that have been prepared by the states in the VISTAS region are based, in part, on the emissions reductions from nearby states that were agreed on through the VISTAS process.

West Virginia submitted a Regional Haze SIP on June 18, 2008, to address the requirements of the Regional Haze Rule. On December 3, 2007, West Virginia submitted its original 1997 Ozone NAAQS infrastructure SIP. On April 3, 2008, West Virginia submitted a 1997 PM<sub>2.5</sub> NAAQS infrastructure SIP. On May 21, 2008, West Virginia submitted amendments to the 1997 Ozone and PM<sub>2.5</sub> NAAQS infrastructure submittal. On October 1, 2009, West Virginia submitted a 2006 PM<sub>2.5</sub> NAAQS infrastructure SIP. In the October 1, 2009 submittal, West Virginia indicated that its Regional Haze SIP would meet the requirements of the CAA, section 110(a)(2)(D)(i)(II), regarding visibility for the 1997 8-Hour Ozone NAAQS and the 1997 and 2006 PM<sub>2.5</sub> NAAQS. West Virginia also indicated it will meet the visibility requirements of 110(a)(2)(f), and specifically references the Regional Haze SIP submitted in June. EPA has reviewed West Virginia’s Regional Haze SIP and, as explained in section VI of

this action, proposes to find that West Virginia’s Regional Haze submittal meets the portions of the requirements of the CAA sections 110(a)(2) relating to visibility protection for the 1997 8-Hour Ozone NAAQS and the 1997 and 2006 PM<sub>2.5</sub> NAAQS.

### **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.<sup>4</sup>

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

<sup>4</sup> The preamble to the RHR provides additional details about the deciview. (64 FR 35714–35725, July 1, 1999).

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 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](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 Haze Rule*, September 2003, (EPA–454/B–03–004 located at [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_tpurhr\\_gd.pdf](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 emission 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 emission 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<sup>5</sup> built between 1962 and 1977 procure, install, and operate the “Best Available Retrofit Technology” as determined by the state. Under the RHR, states are directed to conduct BART determinations for such “BART-eligible” sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, 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 emission 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

<sup>5</sup> The set of “major stationary sources” potentially subject to BART is listed in CAA section 169A(g)(7).

in the BART determination process. The most significant visibility impairing pollutants are SO<sub>2</sub>, NO<sub>x</sub>, and PM. EPA has stated that states should use their best judgment in determining whether VOC or NH<sub>3</sub> 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 emission 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 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 emission 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 FIP in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO<sub>2</sub> and NO<sub>x</sub>. See 40 CFR 51.308(e)(4). Since CAIR is not applicable to emissions of PM, states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant.

#### *E. Long-Term Strategy (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 emission 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) Emission 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 Reasonably Attributable Visibility Impairment (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 Federal 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 the relationship of the CAIR to the regional haze requirements?**

##### *A. Overview of EPA's CAIR*

CAIR, as originally promulgated, requires 28 states and the District of Columbia to reduce emissions of SO<sub>2</sub> and NO<sub>x</sub> that significantly contribute to, or interfere with maintenance of, the NAAQS for fine particulates and/or ozone in any downwind state. See 70 FR 25162 (May 12, 2005). CAIR establishes emission budgets or caps for SO<sub>2</sub> and NO<sub>x</sub> for states that contribute significantly to nonattainment in downwind states and requires the significantly contributing states to submit SIP revisions that implement these budgets. States have the flexibility to choose which control measures to adopt to achieve the budgets, including participation in EPA-administered cap-and-trade programs addressing SO<sub>2</sub>, NO<sub>x</sub>-annual, and NO<sub>x</sub>-ozone season emissions.

##### *B. Remand of the CAIR*

On July 11, 2008, the DC Circuit issued its decision to vacate and remand both CAIR and the associated CAIR FIPs in their entirety. See *North Carolina v. EPA*, 531 F.3d 836 (DC Circuit 2008). However, in response to EPA's petition for rehearing, the court issued an order remanding CAIR to EPA without vacating either CAIR or the CAIR FIPs. The court thereby left the EPA CAIR rule and CAIR SIPs and FIPs in place in order to "temporarily preserve the environmental values covered by CAIR" until EPA replaces it with a rule consistent with the court's opinion. See *North Carolina v. EPA*, 550 F.3d at 1178. The court directed EPA to "remedy CAIR's flaws" consistent with its July 11, 2008, opinion, but declined to impose a schedule on EPA for

completing that action. Because CAIR accordingly has been remanded to the Agency without vacatur, CAIR and the CAIR FIPs are currently in effect in subject states.

##### *C. Regional Haze SIP Elements Potentially Affected by the CAIR Remand*

The following is a summary of the elements of the regional haze SIPs that are potentially affected by the remand of CAIR. Many states relied on CAIR as an alternative to BART for SO<sub>2</sub> and NO<sub>x</sub> for subject EGUs, as allowed under the BART provisions at 40 CFR 51.308(e)(4). Additionally, several states established RPGs that reflect the improvement in visibility expected to result from controls planned for or already installed on sources within the state to meet the CAIR provisions for this implementation period for specified pollutants. Many states relied upon their own CAIR SIPs or the CAIR FIPs for their states to provide the legal requirements which leads to these planned controls, and did not include enforceable measures in the LTS in the regional haze SIP submission to ensure these reductions. States also submitted demonstrations showing that no additional controls on EGUs beyond CAIR would be reasonable for this implementation period. Due to EPA's need to address the concerns of the court as outlined in its decision remanding CAIR, EPA believes it would be inappropriate to fully approve states' LTSs that rely upon the emissions reductions predicted to result from CAIR to meet the BART requirement for EGUs or to meet the RPGs in the states' regional haze SIPs. For this reason, EPA cannot fully approve regional haze SIP revisions that rely on CAIR for emission reduction measures. EPA therefore proposes to grant limited approval and limited disapproval of the West Virginia SIP. The next section discusses how the Agency proposes to address these deficiencies.

##### *D. Rationale and Scope of Proposed Limited Approval*

EPA is intending to propose to issue limited approvals of those regional haze SIP revisions that rely on CAIR to address the impact of emissions from a state's own EGUs. Limited approval results in approval of the entire regional haze submission and all its elements. EPA is taking this approach because an affected state's SIP will be stronger and more protective of the environment with the implementation of those measures by the state and having Federal approval and enforceability than it would



without those measures being included in the state's SIP.

EPA also intends to propose to issue limited disapprovals for regional haze SIP revisions that rely on CAIR concurrently with the proposals for limited approval. As explained in the 1992 Calcagni Memorandum, "[t]hrough a limited approval, EPA [will] concurrently, or within a reasonable period of time thereafter, disapprove the rule \* \* \* for not meeting all of the applicable requirements of the CAA \* \* \* [T]he limited disapproval is a rulemaking action, and it is subject to notice and comment." Final limited disapproval of a SIP submittal does not affect the Federal enforceability of the measures in the subject SIP revision nor prevent state implementation of these measures. The legal effects of the final limited disapproval are to provide EPA the authority to issue a FIP at any time, and to obligate the Agency to take such action no more than two years after the effective date of the final limited disapproval action.

#### V. What is EPA's analysis of West Virginia's regional haze submittal?

On June 18, 2008, WVDEP submitted revisions to the West Virginia SIP to address regional haze in the State's Class I areas as required by EPA's RHR.

##### A. Affected Class I Areas

West Virginia has two Class I areas within its borders: Dolly Sods Wilderness Area and Otter Creek Wilderness Area. West Virginia determined the appropriate RPGs, including consulting with other states that impact these two Class I areas. West Virginia is responsible for describing its own long-term emission strategies, its role in the consultation processes, and how its particular state SIP meets the other requirements in EPA's regional haze regulations.

The West Virginia regional haze SIP establishes RPGs for visibility improvement at each of these Class I areas and a LTS to achieve those RPGs within the first regional haze implementation period ending in 2018. In developing the LTS for each area, West Virginia considered both emission sources inside and outside the state that may cause or contribute to visibility impairment in West Virginia's Class I areas. The State also identified and considered emission sources within West Virginia 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 two areas in West Virginia and those areas affected by emissions from West Virginia.

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

As required by the RHR and in accordance with EPA's 2003 Natural Visibility Guidance, West Virginia calculated baseline/current and natural visibility conditions for each of its Class I areas, as summarized below.

##### 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 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.<sup>6</sup> 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. West Virginia opted to use the default estimates for the natural concentrations combined with the "new IMPROVE equation," for all of its areas. Using this approach, natural visibility conditions using the new IMPROVE

<sup>6</sup> 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 emission 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.

equation were calculated separately for each Class I area by VISTAS.

The new IMPROVE equation takes into account the most recent review of the science<sup>7</sup> 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

The Otter Creek Wilderness Area does not contain an IMPROVE monitor. In cases where onsite monitoring is not available, 40 CFR 51.308(d)(2)(i) requires states to use the most representative monitoring available for the 2000–2004 period to establish baseline visibility conditions, in consultation with EPA. West Virginia used and EPA concurs with the use of 2000–2004 data from the IMPROVE monitor at Dolly Sods Wilderness Area for the Otter Creek Wilderness Area. The Dolly Sods Wilderness Area is nearest to the Otter Creek Wilderness Area and the areas possess similar characteristics, such as meteorology and topography.

WVDEP estimated baseline visibility conditions at both West Virginia Class I

<sup>7</sup> The science behind the revised IMPROVE equation is summarized in Appendix B.2 of the West Virginia Regional Haze submittal and in numerous published papers. See for example: 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](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](http://vista.cira.colostate.edu/improve/Publications/GrayLit/029_NaturalCondII/naturalhazelevelsIIreport.ppt).



areas using available monitoring data from a single IMPROVE monitoring site in the Dolly Sods Wilderness Area. For the first regional haze SIP, baseline visibility conditions are the same as current conditions. 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 each West Virginia Class I area. IMPROVE data records for Dolly Sods Wilderness Area for the period 2000 to

2004 meet the EPA requirements for data completeness, see page 2–8 of EPA’s 2003 Tracking Progress Guidance. This data is also provided at the following Web site: [http://www.metro4-sesarm.org/vistas/SesarmBext\\_20BW.htm](http://www.metro4-sesarm.org/vistas/SesarmBext_20BW.htm).

### 3. Summary of Baseline and Natural Conditions

For the West Virginia Class I areas, baseline visibility conditions on the 20

percent worst days are approximately 30 deciviews (dv). Natural visibility in these areas is predicted to be approximately 11 deciviews on the 20 percent worst days. The natural and baseline conditions for West Virginia’s Class I areas for both the 20 percent worst and best days are presented in Table 1, below.

TABLE 1—NATURAL BACKGROUND AND BASELINE CONDITIONS FOR THE WEST VIRGINIA CLASS I AREAS

Class I area	Average for 20% worst days (dv) <sup>9</sup>	Average for 20% best days (dv)
<b>Natural Background Conditions</b>		
Dolly Sods Wilderness Area .....	10.4	3.6
Otter Creek Wilderness Area .....	10.4	3.6
<b>Baseline Visibility Conditions (2000–2004)</b>		
Dolly Sods Wilderness Area .....	29.0	12.3
Otter Creek Wilderness Area .....	29.0	12.3

<sup>9</sup>EPA’s TSD to this action, entitled, “Technical Support Document for the Modeling Portions of the State of West Virginia’s Regional Haze State Implementation Plan (SIP)” is included in the public docket for this action.

#### 4. Uniform Rate of Progress

In setting the RPGs, West Virginia considered the uniform rate of progress needed to reach natural visibility conditions by 2064 (“glidepath”) and the emission 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 a graph for the 20 percent worst days, for its two Class I areas. West Virginia 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 its two areas. West Virginia’s SIP shows that the State’s RPGs for its areas 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 the West Virginia Class I areas, the overall visibility improvement necessary to reach natural conditions is

the difference between baseline visibility of 29.0 deciviews for the 20 percent worst days and natural conditions of 10.4 deciviews, i.e., 18.6 deciviews. Over the 60-year period from 2004 to 2064, this would require an average improvement of 0.31 deciviews per year to reach natural conditions. Hence, for the 14-year period from 2004 to 2018, in order to achieve visibility improvements at least equivalent to the uniform rate of progress for the 20 percent worst days at Dolly Sods Wilderness Area and the Otter Creek Wilderness Area, West Virginia would need to project at least 4.3 deciviews over the first implementation period (i.e., 0.31 deciviews × 14 years = 4.3 deciviews) of visibility improvement from the 29.0 deciviews baseline in 2004, resulting in visibility levels at or below 24.7 deciviews in 2018. West Virginia projects a 7.3 deciview improvement to visibility from the 29.0 deciview baseline to 21.7 deciviews in 2018 for the 20 percent most impaired days, and a 1.2 deciview improvement to 11.1 deciviews from the baseline visibility of 12.3 deciviews for the 20 percent least impaired days.

#### C. Long-Term Strategy/Strategies

The LTS is a compilation of state-specific control measures relied on by the state for achieving its RPGs. West Virginia’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 West Virginia LTS was developed by the State, in coordination with the VISTAS RPO, through an evaluation of the following components: (1) Identification of the emission units within West Virginia and in surrounding states that likely have the largest impacts currently on visibility at the State’s two Class I areas; (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 areas; and (4) application of the four statutory factors in the reasonable progress analysis for the identified emission units to determine if additional reasonable controls were required.

CAIR is also an element of West Virginia’s LTS. CAIR rule revisions were approved into the West Virginia SIP in 2007 and 2009. See 72 FR 71576 (December 18, 2007) and 74 FR 38536 (August 4, 2009). West Virginia opted to rely on CAIR emission reduction requirements to satisfy the BART requirements for SO<sub>2</sub> and NO<sub>x</sub> from EGUs. See 40 CFR 51.308(e)(4). Therefore, West Virginia only required its BART-eligible EGUs to evaluate PM emissions for determining whether they are subject to BART, and, if applicable,

for performing a BART control assessment. Additionally, West Virginia concluded that no additional controls beyond CAIR are reasonable for reasonable progress for its EGUs for this first implementation period. Prior to the remand of CAIR, EPA believed the State's reliance on CAIR for specific BART and reasonable progress provisions affecting its EGUs was adequate, as detailed later in this notice. As explained in section VI of this notice, the EPA proposes today to issue a limited approval and a proposed limited disapproval of the State's regional haze SIP revision.

#### 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 West Virginia. 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<sub>x</sub>, PM, and SO<sub>2</sub>. The BART Guidelines direct states to exercise judgment in deciding whether VOC and NH<sub>3</sub> impair visibility in their Class I area(s). VISTAS performed modeling sensitivity analyses, which demonstrated that anthropogenic emissions of VOC and NH<sub>3</sub> do not significantly impair visibility in the VISTAS region. Thus, while emissions inventories were also developed for NH<sub>3</sub> and VOC, and applicable Federal VOC reductions were incorporated into West Virginia's regional haze analyses, West Virginia did not further evaluate NH<sub>3</sub> 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 West Virginia anticipate will reduce emissions between the end of the baseline period and 2018. Emission reductions from these control programs are projected to achieve substantial visibility improvement by 2018 in the West Virginia Class I areas. The control programs relied upon by West Virginia include CAIR; the NO<sub>x</sub> SIP Call; North Carolina's Clean Smokestacks Act; Georgia multi-pollutant rule; consent agreements for Santee Cooper, Tampa Electric, Virginia Electric and Power Company, Gulf Power, East Kentucky Power Cooperative, Dupont, West Point Paper Mill, Alabama Power, American Electric Power; Federal 2007 heavy duty diesel (2007) engine standards for on-road trucks and busses; Federal Tier 2 tailpipe controls for on-road vehicles; Federal large spark ignition and recreational vehicle controls; and EPA's non-road diesel rules.

Controls from various Federal Maximum Achievable Control Technology (MACT) rules were also utilized in the development of the 2018 emission 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.

On July 30, 2007, the U.S. District Court of Appeals mandated the vacatur and remand of the Industrial Boiler MACT Rule.<sup>8</sup> This MACT was vacated since it was directly affected by the vacatur and remand of the Commercial and Industrial Solid Waste Incinerator (CISWI) Definition Rule. Notwithstanding the vacatur of this rule, the VISTAS states, including West Virginia, decided to leave these controls in the modeling for their regional haze

SIPs since it is believed that by 2018, EPA will have re-promulgated an industrial boiler MACT rule or the states will have addressed the issue through state-level case-by-case MACT reviews in accordance with section 112(j) of the CAA. EPA finds this approach acceptable for the following reasons. 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), giving West Virginia time to assure the required controls are in place prior to the end of the first implementation period in 2018. In the absence of an established MACT rule for boilers and process heaters, the statutory language in section 112(j) of the CAA specifies a schedule for the incorporation of enforceable MACT-equivalent limits into the title V operating permits of affected sources. Should circumstances warrant the need to implement section 112(j) of the CAA for industrial boilers, we would expect, in this case, that compliance with case-by-case MACT limits for industrial boilers would occur no later than January 2015, which is well before the 2018 RPGs for regional haze. In addition, the RHR requires that any resulting differences between emissions projections and actual emissions reductions that may occur will be addressed during the five-year review prior to the next 2018 regional haze SIP. The expected reductions due to the original, vacated Industrial Boiler MACT rule were relatively small compared to the State's total SO<sub>2</sub>, PM<sub>2.5</sub>, and coarse particulate matter (PM<sub>10</sub>) emissions in 2018 (i.e., 0.5 to 1.5 percent, depending on the pollutant, of the projected 2018 SO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> inventory), and not likely to affect any of West Virginia's modeling conclusions. Thus, if there is a need to address discrepancies such that projected emissions reductions from the now-vacated Industrial Boiler MACT were greater than actual reductions achieved by the replacement MACT, we would not expect that this would affect the adequacy of the existing West Virginia regional haze SIP.

Below, in Tables 2 and 3, are summaries of the 2002 baseline and 2018 estimated emission inventories for West Virginia.

<sup>8</sup> See *NRDC v. EPA*, 489 F.3d 1250.

TABLE 2—2002 EMISSIONS INVENTORY SUMMARY FOR WEST VIRGINIA  
[Tons per year]

	VOC	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>
Point .....	15,775	453	22,076	15,523	277,589	570,153
Area .....	60,443	9,963	115,346	21,049	12,687	11,667
On-Road Mobile .....	45,284	2,036	1,481	1,068	63,525	2,635
Non-Road Mobile .....	18,566	9	1,850	1,728	33,329	2,112
Biogenics .....	357,850	N/A	N/A	N/A	2,776	N/A
Total .....	499,976	12,461	143,771	42,385	390,703	586,568

\* N/A—Not applicable.

TABLE 3—2018 EMISSIONS INVENTORY SUMMARY FOR WEST VIRGINIA  
[Tons per year]

	VOC	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>
Point .....	17,952	593	28,084	20,165	94,600	177,517
Area (includes fires) .....	62,806	11,504	124,566	24,507	15,716	12,849
On-Road Mobile .....	14,652	2,268	747	369	15,530	231
Non-road Mobile .....	14,086	13	1,292	1,198	25,710	56
Biogenics .....	357,850	N/A	N/A	N/A	2,776	N/A
Total .....	467,347	14,377	154,688	46,239	154,332	190,653

## 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 West Virginia. 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<sub>2.5</sub>, 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 emission inputs of mobile, non-road mobile, area, point, fire and biogenic emission 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 x 12 kilometer (km) 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 x 36 km 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<sub>2.5</sub>, 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 West Virginia 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 accepts 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's analysis of VISTAS modeling procedures and results is in the accompanying Technical Support Document (TSD).<sup>9</sup> EPA agrees with the VISTAS model performance procedures and results, and that the CMAQ is an appropriate tool for the regional haze assessments for the West Virginia 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 emission 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<sub>2.5</sub> 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 greater than 70 percent of the calculated light extinction at Class I areas in the Southern Appalachians. In particular, for Dolly Sods Wilderness Area, sulfate particles resulting from SO<sub>2</sub> emissions contribute roughly 80 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 VISTAS Class I areas on the 20 percent worst visibility days. Particulate organic matter (organic carbon) accounted for 10–20 percent of light extinction on the 20 percent worst visibility days.

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. West Virginia's Class I areas are both “inland” areas.

Results from VISTAS' emission sensitivity analyses indicate that sulfate particles resulting from SO<sub>2</sub> emissions are the dominant contributor to visibility impairment on the 20 percent worst days at all Class I areas in VISTAS, including the two West Virginia areas. West Virginia concluded that reducing SO<sub>2</sub> emissions from EGU and non-EGU point sources in the VISTAS states would have the greatest visibility benefits for the West Virginia Class I areas. Because ammonium nitrate is a small contributor to PM<sub>2.5</sub> mass and visibility impairment on the 20 percent worst days at the inland Class I areas in VISTAS, which include Dolly Sods Wilderness Area and Otter Creek Wilderness Area, the benefits of reducing NO<sub>x</sub> and NH<sub>3</sub> emissions at these sites are small.

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 West Virginia. 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.

West Virginia considered the factors listed in 40 CFR 51.308(d)(3)(v) to develop its LTS, as described below. West Virginia, 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 areas in West Virginia. WVDEP is not adopting any additional

controls on agricultural fires, prescribed fires, and wildfires, but does have a rule in place, Regulation 45CSR6—To Prevent and Control Air Pollution from Combustion of Refuse (74 FR 12560, March 25, 2009), which adopted revisions to include a provision for prescribed burning. In addition, the WVDEP has a number of rules in place that require the control of fugitive dust within plant boundaries, these include Regulation 45CSR2—To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers (68 FR 47473, August 11, 2003); Regulation 45CSR3—To Prevent and Control Air Pollution from the Operation of Hot Mix Asphalt Plants (67 FR 63270, October 11, 2002); Regulation 45CSR5—To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas (67 FR 62379, October 7, 2002); and Regulation 45CSR7—To Prevent and Control Particulate Matter Air (68 FR 33010, June 3, 2003). EPA 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 areas, and therefore, finds that West Virginia has adequately satisfied 40 CFR 51.308(d)(3)(v).

The emissions sensitivity analyses conducted by VISTAS predict that reductions in SO<sub>2</sub> 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 West Virginia, the VISTAS sensitivity analysis projects visibility benefits in Dolly Sods Wilderness Area and Otter Creek Wilderness Area from SO<sub>2</sub> 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<sub>2</sub> emission reductions from non-utility industrial point sources. SO<sub>2</sub> 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 in VISTAS.

Taking the VISTAS sensitivity analyses results into consideration, West Virginia concluded that reducing SO<sub>2</sub> emissions from EGU and non-EGU point sources in certain VISTAS states would have the greatest visibility benefits for the West Virginia Class I

<sup>9</sup> EPA's TSD to this action, entitled, “Technical Support Document for the Modeling Portions of the State of West Virginia's Regional Haze State Implementation Plan (SIP)” is included in the public docket for this action.

areas. The State chose to focus solely on evaluating certain SO<sub>2</sub> sources contributing to visibility impairment to the State's Class I areas for additional emission reductions for reasonable progress in this first implementation period. EPA agrees with the State's analyses and conclusions used to determine the pollutants and source categories that most contribute to visibility impairment in the West Virginia Class I areas, and finds the State's approach to focus on developing a LTS that includes largely additional measures for point sources of SO<sub>2</sub> emissions to be appropriate.

SO<sub>2</sub> 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<sub>2</sub> 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 West Virginia and Surrounding Areas

Through comprehensive evaluations by VISTAS and the Southern Appalachian Mountains Initiative (SAMI),<sup>10</sup> the VISTAS states concluded that sulfate particles resulting from SO<sub>2</sub> emissions account for the greatest portion of the regional haze affecting the Class I areas in VISTAS states, including those in West Virginia. Utility and non-utility boilers are the main sources of SO<sub>2</sub> emissions within the southeastern United States. VISTAS developed a methodology for West Virginia, which

enables the State to focus its reasonable progress analysis on those geographic regions and source categories that impact visibility at each of its Class I areas. Recognizing that there was neither sufficient time nor adequate resources available to evaluate all emission units within a given area of influence (AOI) around each Class I area that West Virginia's sources impact, the State established a threshold to determine which emission units would be evaluated for reasonable progress control. In applying this methodology, WVDEP first calculated the fractional contribution to visibility impairment from all emission units within the SO<sub>2</sub> AOI for each of its Class I areas, and those surrounding areas in other states potentially impacted by emissions from emission units in West Virginia. The State then identified those emission 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 emission unit.

West Virginia's SO<sub>2</sub> AOI methodology captured greater than 64 percent of the total point source SO<sub>2</sub> contribution to visibility impairment in the two Class I areas in West Virginia, and required an evaluation of 17 emission units. Capturing a significantly greater percentage of the total contribution would involve an evaluation of many more emission units that have substantially less impact. EPA believes the approach developed by VISTAS and implemented for the Class I areas in West Virginia 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 areas. The approach is consistent with EPA's Reasonable Progress Guidance. The technical approach of VISTAS and West Virginia was objective and based on several analyses, which included a large universe of emission units within and surrounding the State of West Virginia and all of the 18 VISTAS Class I areas. It also included an analysis of the VISTAS emission 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

WVDEP identified 17 EGU units with SO<sub>2</sub> 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.<sup>11</sup>

##### a. Facilities With an Emissions Unit Subject to Reasonable Progress Analysis

Only one facility was a non-EGU that was subject to the four factor reasonable progress analysis. That facility is Capitol Cement which showed a greater than 1% contribution to Shenandoah National Park in Virginia. WVDEP analyzed whether SO<sub>2</sub> controls should be required for one facility, Capitol Cement, 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, WVDEP concluded that it was not equitable to require non-EGUs to bear a greater economic burden than EGUs for a given control strategy. Using the CAIR rule as a guide, a cost of \$2,000 per ton of SO<sub>2</sub> controlled or reduced was used as a determiner of cost effectiveness.

Capitol Cement is a portland cement manufacturing facility. Only Kiln 7 at Capitol Cement was identified as requiring reasonable progress analysis since Kilns 8 and 9 were replaced in 2002. WVDEP determined that the new preheater kiln should also be reviewed with respect to reasonable progress. VISTAS contracted with Alpine Geophysics to evaluate control options and costs for sources within AOI for the Class I areas of concern, including Capitol Cement. Alpine used EPA's Air ControlNet software to evaluate control options and costs for controls on Kiln 7. The control option identified was flue gas desulfurization (FGD) with a cost effectiveness of \$25,266 per ton, which exceeds the State's \$2,000 cost-effectiveness threshold for reasonableness. For the precalciner system, the control options and costs for controls were developed by the Mid-Atlantic/Northeast Visibility Union (MANE-VU) RPO through a contract with MACTEC, Inc., and published in the project report, *Assessment of Reasonable Progress for Regional Haze In MANE-VU Class I Areas*, dated July

<sup>10</sup> 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, the USEPA, 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.

<sup>11</sup> See also West Virginia SIP Appendix H fractional contribution analysis tables for each Class I Area.

9, 2007. WVDEP used this report for considering other control options and costs. The control options evaluated were Dry FGD, Wet FGD, and Advanced FGD. The cost per ton of SO<sub>2</sub> removed ranged from \$9,700–\$72,800. All control options are well above the State's \$2,000 cost-effectiveness threshold for reasonableness. The other statutory factors: (1) Time of necessary for compliance, (2) the energy and non-air quality environmental impacts of compliance, and (3) the remaining useful life of the emissions unit, were deemed not applicable, since there were no cost effective controls to evaluate.

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. In determining reasonable progress, states must consider, at a minimum, the four statutory factors, but states have flexibility in how to take these factors into consideration.

West Virginia applied the methodology developed by VISTAS for identifying appropriate sources to be considered for additional controls under reasonable progress for the implementation period addressed by this SIP, which ends in 2018. Using this methodology, WVDEP first identified those emissions and emissions units most likely to have an impact on visibility in the State's Class I areas. Units with emissions of SO<sub>2</sub> 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, of the emission units in West Virginia, one unit was subject to this analysis. WVDEP concluded, based on their evaluation of Capitol Cement, that no further controls were warranted at this time.

Having reviewed WVDEP's methodology and analyses presented in the SIP materials prepared by WVDEP, EPA is proposing to approve West Virginia's conclusion that no further controls are reasonable for this implementation period for the reviewed sources. EPA agrees with the State's approach of identifying the key pollutants contributing to visibility impairment at its Class I areas, and consider their methodology to identify sources of SO<sub>2</sub> most likely to have an impact on visibility on any Class I area, to be an appropriate methodology for

narrowing the scope of the State's analysis. In general, EPA also finds West Virginia's evaluation of the four statutory factors for reasonable progress to be reasonable. Although the use of a specific threshold for assessing costs means that West Virginia may not have fully considered other available emissions reduction measures above their threshold, EPA believes that the West Virginia SIP still ensures reasonable progress. EPA notes that given the emissions reductions resulting from CAIR, West Virginia's BART determinations, and the measures in nearby states, the visibility improvements projected for the affected Class I areas are in excess of that needed to be on the uniform rate of progress glidepath. In considering West Virginia's approach, EPA is also proposing to place great weight on the fact that there is no indication in the SIP submittal that West Virginia, 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 areas. In addition, EPA finds that West Virginia fully evaluated, in terms of the four reasonable progress factors, all control technologies available at the time of its analysis and applicable to these facilities.

#### b. Emission Units Exempted From Preparing a Reasonable Progress Control Analysis

Seventeen emission units identified for a reasonable progress control analysis are EGUs. These EGUs are subject to CAIR and were also found to be subject to BART. These EGUs are Allegheny Energy—Ft. Martin, Harrison, and Pleasants; AEP-Appalachian Power—John Amos and Mountaineer; and Dominion-Mt. Storm.

To determine whether any additional controls beyond those required by CAIR would be considered reasonable for West Virginia's EGUs for this first implementation period, WVDEP evaluated the SO<sub>2</sub> reductions expected from the EGU sector. The EGUs located in West Virginia are expected to reduce their 2002 SO<sub>2</sub> emissions by approximately 78 percent by 2018. WVDEP believes it has an accurate understanding of where EGU emission reductions will occur in West Virginia based upon existing and planned installations of post combustion controls for the afore mentioned EGUs, that are or will be controlled with greater than 90% efficiency.

To further evaluate whether CAIR requirements will satisfy reasonable progress for SO<sub>2</sub> for EGUs, WVDEP considered the four reasonable progress

factors set forth in EPA's RHR as they apply to the State's entire EGU sector for available control technologies. The State also reviewed CAIR requirements that include 2015 as the "earliest reasonable deadline for compliance" for EGUs installing retrofits, see (70 FR 25162, 25197–25198, May 12, 2005). This is a particularly relevant consideration because CAIR addresses the reasonable progress factors of cost and time necessary for compliance. In the preamble to CAIR, EPA recognized there are a number of factors that influence compliance with the emission reduction requirements set forth in CAIR, which make the 2015 compliance date reasonable. For example, each EGU retrofit requires a large pool of specialized labor resources, which exist in limited quantities. In addition, retrofitting an EGU is a very capital-intensive venture and, therefore, undertaken with caution. Hence, allowing retrofits to be installed over time enables the industry to learn from early installations. Lastly, EGU retrofits over time minimize disruption of the power grid by enabling industry to take advantage of planned outages.

Since EPA made the determination in CAIR that the earliest reasonable deadline for compliance for reducing emissions was 2015, WVDEP concluded that the emission reductions required by CAIR constitute reasonable measures for West Virginia EGUs during this first assessment period (between baseline and 2018). In addition, WVDEP notes that while the reasonable progress evaluation only applies to existing sources, the State will continue to follow the visibility analysis requirements as part of all new major source new source review (NSR) and PSD permitting actions.

Prior to the CAIR remand by the D.C. Circuit, EPA believed the State's demonstration that no additional controls beyond CAIR are reasonable for SO<sub>2</sub> for affected EGUs for the first implementation period to be acceptable on the basis that the CAIR requirements, reflected the most cost-effective controls that can be achieved over the CAIR SO<sub>2</sub> compliance timeframe, which spans out to 2015. However, the State's demonstration regarding CAIR and reasonable progress for EGUs, and other provisions in this SIP revision, are based on CAIR and thus, the Agency proposes today to issue a limited approval and a limited disapproval of the State's regional haze SIP revision.

#### 6. BART

BART is an element of West Virginia'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 WVDEP and WVDEP's findings, are discussed below.

#### a. BART-Eligible Sources

The first phase of a BART evaluation is to identify all the BART-eligible sources within the state's boundaries. WVDEP identified the BART-eligible sources in West Virginia 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 emission units at the facility fit within one of the 26 categories listed in the BART Guidelines; (2) emission unit(s) was constructed on or after August 6, 1962, and was in existence prior to August 6, 1977; and (3) potential emissions of any visibility-impairing pollutant from subject units are 250 tons or more per year.

The BART Guidelines also direct states to address SO<sub>2</sub>, NO<sub>x</sub> and direct PM (including both PM<sub>10</sub> and PM<sub>2.5</sub>) emissions as visibility-impairment pollutants, and to exercise judgment in determining whether VOC or ammonia emissions from a source impair visibility in an area (70 FR 39160). VISTAS modeling demonstrated that VOC from anthropogenic sources and ammonia from point sources are not significant visibility-impairing pollutants in West Virginia. WVDEP has determined, based on the VISTAS modeling, that VOC and ammonia emissions from the State's point sources are not anticipated to cause or contribute significantly to any impairment of visibility in Class I areas and should be exempt for BART purposes.

#### 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, West Virginia 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.

The BART Guidelines allow states to use the CALPUFF<sup>12</sup> modeling system or another appropriate model to predict the visibility impacts from a single source on a Class I area, and to therefore, 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." The Guidelines state that EPA believes CALPUFF is the best regulatory modeling application currently available for predicting a single source's contribution to visibility impairment (70 FR 39162). West Virginia, in coordination with VISTAS, used the CALPUFF modeling system to determine whether individual sources in West Virginia were subject to or exempt from 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 West Virginia, 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. 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.

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

<sup>12</sup> Note that our 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>.

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.

West Virginia used a contribution threshold of 0.5 deciview for determining which sources are subject to BART. EPA agrees with the State's rationale for choosing this threshold value. The results of the visibility impacts modeling demonstrated that the majority of the individual BART-eligible sources had visibility impacts well below 0.5 deciview.

West Virginia initially identified twenty-two BART-eligible sources. The State subsequently determined that nineteen sources are exempt from being considered BART-eligible. Nineteen of the twenty-two sources were able to demonstrate exemptions with modeling demonstrations. Table 4 identifies the nineteen BART-exempt facilities located in West Virginia, and identifies the three sources subject to BART.

TABLE 4—WEST VIRGINIA BART-ELIGIBLE AND SUBJECT-TO-BART SOURCES

Facilities With Unit(s) Subject to BART Analysis
Dominion—Mt. Storm. <sup>13</sup> PPG Industries. Capitol Cement.
Facilities With Unit(s) Found Not Subject to BART
<p><i>EGU CAIR and BART Modeling Sources:</i> AEP-Appalachian Power Co.—John Amos. AEP-Ohio Power Co.—Mitchell. AEP-Appalachian Power Co.—Mountaineer. Allegheny Energy—Ft. Martin. Allegheny Energy—Harrison. Allegheny Energy—Pleasants.</p> <p><i>Non-EGU BART Modeling:</i> Mittal Steel USA—Weirton, Inc. Mountain State Carbon. ERGON Corp.—West Virginia, Inc. Century Aluminum. DuPont Belle. Clearon. Pocahontas Coal Co.—Eastern Gulf Prep Plant. GE Woodmark. Pinnacle Mining—No. 50 Coal Prep Plant. Kepler Processing. Bayer.</p>



TABLE 4—WEST VIRGINIA BART-ELIGIBLE AND SUBJECT-TO-BART SOURCES—Continued

Columbia Chemicals.  
Cabot Corporation.

West Virginia found that three of its BART-eligible sources (i.e., Dominion—Mt. Storm, PPG Industries, and Capitol Cement) had modeled visibility impacts of more than the 0.5 deciview threshold for BART exemption. These three facilities are considered to be subject to BART and submitted State permit applications including their proposed BART determinations.

Although PPG Industries initially modeled a visibility impact greater than 0.5 deciviews on multiple Class I areas, PPG Industries elected to accept a permit limit on its BART eligible unit, which reduces its visibility impact to below the exemption threshold of 0.5 deciviews of impact at any Class I area. Therefore, PPG Industries is now considered BART exempt.

The remaining nineteen sources demonstrated that they are exempt from being subject to BART by modeling less than a 0.5 deciview visibility impact at the affected Class I areas. The seven BART-eligible EGUs only modeled PM<sub>10</sub> emissions because West Virginia relied on CAIR to satisfy BART for SO<sub>2</sub> and NO<sub>x</sub> for its EGUs in CAIR, in accordance with 40 CFR 51.308(e)(4). Six out of the seven EGUs modeling demonstrated that PM<sub>10</sub> emissions do not contribute to visibility impairment in any Class I area. Modeling at the Dominion—Mt. Storm, on the other hand, demonstrated that its PM<sub>10</sub> emissions exceeded the 0.5 deciview contribution threshold and thus, required a BART analysis. Prior to the CAIR remand, the State's reliance on CAIR to satisfy BART for NO<sub>x</sub> and SO<sub>2</sub> for affected CAIR EGUs was fully approvable and in accordance with 40 CFR 51.308(e)(4). However, as explained in section IV of this notice, the BART assessments for CAIR EGUs for NO<sub>x</sub> and SO<sub>2</sub> and other provisions in this SIP revision are based on CAIR, and thus, the Agency proposes today to issue a limited approval and a limited disapproval of the State's June 18, 2008, regional haze SIP revision.

#### c. BART Determinations

Dominion—Mt. Storm has modeled visibility impacts of more than the 0.5 deciview threshold for BART exemption

and, therefore, is considered to be subject to BART for PM<sub>10</sub> only. Capitol Cement did not submit an exemption modeling demonstration because the BART unit is scheduled to be replaced. Since these two facilities did not demonstrate that they are exempt from BART, each one submitted to the State, permit applications 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.

Dominion—Mt. Storm is an EGU containing three BART-subject units and is only subject to BART for PM<sub>10</sub>. Units 1, 2, and 3 are subject to BART. The current PM controls of electrostatic precipitator (ESP) and flue gas desulfurization (FGD) were determined to satisfy BART, however, the allowable PM<sub>10</sub> emission rate was lowered from 0.05 pounds per million british thermal units (lb/mmBtu) to 0.03 lb/mmBtu, resulting in a reduction of up to 508 tons per year (tpy) per unit, or maximum reduction of 1524 tpy. The EPS and FGD must aggregate 99.5 percent PM<sub>10</sub> removal efficiency. The compliance date for Dominion—Mt. Storm is December 13, 2007 for BART controls.

The three emission units at Dominion—Mt. Storm are also subject to the EPA CAIR. Dominion—Mt. Storm has already installed scrubbers and NO<sub>x</sub> controls on the emission units at this facility. West Virginia has opted to rely on CAIR to satisfy BART for SO<sub>2</sub> and NO<sub>x</sub> for its EGUs subject to CAIR, as allowed by 40 CFR 51.308(e)(4).

Once the BART limits are established, the source is then required by 40 CFR 51.308(e)(1)(v) to maintain the control equipment required and establish procedures to ensure such equipment is properly operated and maintained. For Dominion—Mt. Storm, Units 1, 2, and 3 are required to calculate the potential particulate matter emissions on a daily basis using the monitoring procedures and calculation methodology outlined in Regulation 45 CSR 2's monitoring plan. Dominion—Mt. Storm shall record any instance of calculated emissions in excess of the limits given above and any corrective actions taken. Dominion—Mt. Storm shall also maintain and operate,

at all reasonable times, appropriate equipment on the ESP and FGD, to continuously monitor the performance of each control device. PM<sub>10</sub> testing is done in accordance with the schedule listed in Regulation 45 CSR 2.

EPA agrees with WVDEP's analyses and conclusions for the BART emission units located at Dominion—Mt. Storm. EPA has reviewed the West Virginia analyses and concluded they were conducted in a manner that is consistent with EPA's BART Guidelines. Therefore, the conclusions reflect a reasonable application of EPA's guidance to this source.

PPG Industries elected to accept a permit limit on its BART eligible unit which reduces its visibility impact to below the exemption threshold of 0.5 deciview impact at any Class I area. Therefore, PPG is considered BART exempt. PPG Industries has taken a BART limit of 1478.8 pounds per hour (lbs/hour) on Boiler 5 and the total SO<sub>2</sub> emissions from Boilers 3, 4, and 5 shall not exceed 3766.8 lbs/hour. PPG Industries is required to get 4690.56 tpy of SO<sub>2</sub> emission reductions from Boiler 5 by May 1, 2008. EPA agrees with WVDEP's conclusion that PPG Industries is now BART-exempt based on the threshold of 0.5 deciview impact sited in EPA's BART guidance.

Capitol Cement is a Portland cement manufacturing facility located in Martinsburg, WV that previously applied for and had been granted a PSD permit. The PSD permit was for the replacement of two existing long wet process cement kilns and associated clinker coolers with a modern precalciner system and associated equipment. The only BART-eligible unit at the facility, Kiln 9, is one of the two kilns being replaced, and the permit includes a requirement for the permanent shutdown of the existing kilns.

WVDEP has determined no additional controls would need to be installed on Kiln 9 since the PSD permit requires a permanent shutdown of the existing kiln by the BART compliance deadline, or when full-production was achieved with the replacement kiln, or no later than 180 days after startup. The modifications at Capitol Cement are expected to result in 1741.51 tpy of SO<sub>2</sub> reductions, 1374.81 tpy of NO<sub>x</sub> reductions, and 66.01 tpy of PM<sub>10</sub> reductions. EPA agrees with WVDEP's conclusions for BART for the Capitol Cement facility: That no additional controls need to be installed prior to permanent shutdown of Kiln 9.

The BART determinations for each of the facilities discussed above and the resulting BART emission limits were

<sup>13</sup> EGUs were only evaluated for PM emissions. West Virginia relied on CAIR to satisfy BART for SO<sub>2</sub> and NO<sub>x</sub> for its EGUs in CAIR, in accordance with 40 CFR 51.308(e)(4). Thus, SO<sub>2</sub> and NO<sub>x</sub> were not analyzed.

adopted by West Virginia into the State's regional haze SIP. WVDEP incorporated the BART emission limits into state operating permits, and submitted these permits as part of the State's regional haze SIP. The BART limits adopted in the SIP are as follows: For Dominion—Mt. Storm, an allowable PM<sub>10</sub> emission rate of 0.03lb/mmBtu for Units 1, 2, and 3; for PPG Industries, a limit of 1478.8 lbs/hr for Boiler 5; and for Capitol Cement, to shutdown Kiln 9 within 180 days of startup of the new preheater-precaciner kiln, or when full-production is achieved with the replacement kiln, or before BART Compliance deadline, whichever comes first. The BART compliance dates West Virginia has set in their June 18, 2008 Regional Haze Submittal comply with the BART Rule requiring controls be implemented no later than five years after publication in the **Federal Register** for the U.S. EPA Final Approval of the West Virginia Regional Haze SIP.

#### 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 West Virginia Class I areas 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 West Virginia. Any controls resulting from those determinations will provide additional emissions reductions and resulting visibility improvement, which give further assurances that West Virginia 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 both of the West

Virginia's Class I areas 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 5 below, West Virginia'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 areas. Also, the RPGs for the 20 percent best days provide greater visibility improvement by 2018 than current best day conditions. The modeling supporting the analysis of these RPGs is consistent with EPA guidance prior to the CAIR remand. 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 West Virginia, took into account emission reductions anticipated from CAIR in determining their 2018 RPGs.<sup>14</sup>

TABLE 5—WEST VIRGINIA RPGS  
[In deciviews]

Class I area	Baseline visibility, 20% worst days	2018 Reasonable progress goal, 20% worst days (improvement from baseline)	Uniform rate of progress at 2018, 20% worst days	Baseline visibility, 20% best days	2018 Reasonable progress goal, 20% best days (improvement from baseline)
Dolly Sods Wilder- ness Area .....	29.0	21.7 (7.3)	24.7	12.3	11.1 (1.2)
Otter Creek Wilder- ness Area .....	29.0	21.7 (7.3)	24.7	12.3	11.1 (1.2)

The RPGs for the Class I areas in West Virginia 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 emission 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 adjust the RPG 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 goal (64 FR 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 emission 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.

EPA anticipates that the Transport Rule will result in similar or better improvements in visibility than predicted from CAIR. Because the Transport Rule is not final, however, we do not know at this time how it will affect any individual Class I area and cannot accurately model future conditions based on its implementation. By the time West Virginia is required to undertake its five year progress review,

<sup>14</sup> Many of the CAIR states without Class I areas similarly relied on CAIR emission 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.

however, it is likely that the impact of the Transport Rule and other measures can be meaningfully assessed. If, in particular Class I areas, the Transport Rule does not provide similar or greater benefits than CAIR and meeting the RPGs at one of its Federal Class I Areas is in jeopardy, the State will be required to address this circumstance in its five year review. Accordingly, EPA proposes to approve West Virginia's RPGs for the Dolly Sods Wilderness Area and the Otter Creek Wilderness 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 the RHR. 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. 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 Federal area includes any integral vista associated with that area. The FLMs did not identify any integral vistas in West Virginia. In addition, neither Class I area in West Virginia is experiencing RAVI, nor are any of its sources affected by the RAVI provisions. Thus, the June 18, 2008, West Virginia regional haze SIP submittal does not explicitly address the two requirements regarding coordination of the regional haze with the RAVI LTS and monitoring provisions. However, West Virginia previously made a commitment to address RAVI should the FLM certify visibility impairment from an individual source.<sup>15</sup> EPA finds that this regional haze submittal appropriately supplements and augments West Virginia's RAVI visibility provisions to address regional haze by updating the monitoring and LTS provisions.

In the June 18, 2008 submittal, WVDEP updated its visibility monitoring program and developed a LTS to address regional haze. Also in this submittal, WVDEP affirmed its commitment to complete items required in the future under EPA's RHR. Specifically, WVDEP 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, WVDEP made a commitment to submit a report to EPA on progress towards the RPGs for each mandatory Class I area located within West Virginia, and in each mandatory Class I area located outside West Virginia which may be affected by emissions from within West Virginia. 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. Consistent with EPA's monitoring regulations for RAVI and regional haze, West Virginia 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 West Virginia NSR 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 Federal Class I Area.

#### *E. Monitoring Strategy and Other Implementation Plan Requirements*

The primary monitoring network for regional haze in West Virginia is the IMPROVE network. There is currently one IMPROVE site in West Virginia, which serves as the monitoring site for both the Dolly Sods Wilderness Area and Otter Creek Wilderness Area.

IMPROVE monitoring data from 2000–2004 serves as the baseline for the regional haze program, and is relied upon in the June 18, 2008, regional haze submittal. In the submittal, West Virginia 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. West Virginia 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, there is long-term limited monitoring by the FLMs, which provides additional insight into the progress toward the regional haze goals. Such measurements include web cameras operated by the United States Department of Agriculture Forest Service at Dolly Sods. West Virginia and the local air agencies in the State operate a comprehensive PM<sub>2.5</sub> network of filter-based Federal reference method monitors and filter based 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.

WVDEP has evaluated the impact of West Virginia 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, West Virginia applied its AOI methodology to identify sources in the State that have emission units with impacts large enough to potentially warrant further evaluation and analysis. Based on an evaluation of the four reasonable progress statutory factors, West Virginia determined that there are no additional control measures for these West Virginia emission units that would be reasonable to implement to mitigate visibility impacts in Class I areas in these neighboring states. WVDEP has consulted with these states regarding its reasonable progress control evaluations showing no cost-effective controls available for those emission units in West Virginia contributing at least one percent to visibility impairment at Class I areas in the states. Additionally, WVDEP sent letters to the other states in the VISTAS region documenting its analysis that there are no cost-effective controls available for those units whose SO<sub>2</sub> emission contribute at least one

<sup>15</sup> West Virginia also submitted a SIP revision addressing PSD that EPA approved on November 2, 2006 (71 FR 64470) and NSR that EPA approved on November 2, 2006 (71 FR 64468).

percent to visibility impairment at Class I areas.

Regarding the impact of sources outside of the State on Class I areas in West Virginia, WVDEP sent letters to Maryland pertaining to the New Page facility located in Luke, Maryland because it contributes 11.81 percent of sulfate at Dolly Sods Wilderness Area with 9.86 percent attributable to two units, one of which is subject to BART. The Maryland Department of the Environment is still in the process of evaluating BART and reasonable progress for the New Page facility. Any controls resulting from these determinations will provide additional emissions reductions and result in visibility improvement, which gives further assurances that West Virginia will achieve its RPGs. Therefore, to be conservative, West Virginia opted not to rely on any additional emission reductions from sources located outside the State's boundaries beyond those already identified in the State's regional haze SIP submittal.

West Virginia received letters from the MANE-VU RPO States of Maine, New Jersey, New Hampshire, and Vermont in the spring of 2007, stating that based on MANE-VU's analysis of 2002 emissions data, West Virginia contributed to visibility impairment to Class I areas in those states. The MANE-VU states identified thirteen EGU stacks in West Virginia that they would like to see controlled to 90 percent efficiency. They also requested a control strategy to provide a 28 percent reduction in SO<sub>2</sub> emissions from sources other than EGUs that would be equivalent to MANE-VU's proposed low sulfur fuel oil strategy. All thirteen of the EGU stacks identified by MANE-VU will be controlled by 2018, and thirteen of the units will be controlled with a 95 percent efficiency, resulting in an additional 73,015 tons of SO<sub>2</sub> reductions beyond those requested by MANE-VU. West Virginia's non-EGUs are predicted to emit 61,704 tons of SO<sub>2</sub> in 2018. MANE-VU's request of 28 percent reduction would be 17,277 tons of SO<sub>2</sub>. The additional 91,864 tons of SO<sub>2</sub> reductions achieved by the installation and operation of more efficient controls on EGUs and the shutdown of additional EGUs, will achieve greater reductions than the 28 percent reduction requested by MANE-VU. These reductions satisfy MANE-VU's request. EPA finds that West Virginia 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, West Virginia 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. The proposed regional haze plan for West Virginia was submitted to the FLMs for review on September 21, 2007. West Virginia received comments from the FLMs on October 22, 2007. Since the comments were received prior to the start of the public hearing, the WVDEP was able to incorporate some of the suggested changes in the public review document. The public comment period was from October 26, 2007 to November 27, 2007. However, due to the short time frame not all comments could be addressed prior to the start of the public comment period, but were addressed in a separate document titled "Federal Land Manager Consultation." WVDEP reopened the public comment period for two specific portions of the proposed SIP. The two specific parts of the Regional Haze SIP were a revised BART determination and the FLM conclusions/recommendations and DEP responses. To address the requirement for continuing consultation procedures with the FLMs under 40 CFR 51.308(i)(4), WVDEP made a commitment in the SIP to ongoing consultation with the FLMs on regional haze issues throughout implementation of its plan, including annual discussions. WVDEP also affirms in the SIP that FLM consultation is required for those sources subject to the State's NSR regulations.

## G. Periodic SIP Revisions and Five-Year Progress Reports

Consistent with 40 CFR 51.308(g), WVDEP 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 West Virginia regional haze SIP. The report will evaluate the progress made towards the RPGs for each mandatory Class I area located within West Virginia and in each mandatory Class I area located outside West Virginia which may be affected by emissions from within West Virginia. West Virginia also offered recommendations for several technical improvements that, as funding allows, can support the State's next LTS.

If another state's regional haze SIP identifies that West Virginia's SIP needs to be supplemented or modified, and if, after appropriate consultation West Virginia agrees, today's action may be

revisited, or additional information and/or changes will be addressed in the five-year progress report SIP revision.

## VI. What action is EPA proposing to take?

EPA is proposing a limited approval and a limited disapproval of a revision to the West Virginia SIP submitted by the State of West Virginia on June 18, 2008, 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. EPA is also proposing to find that this revision meets the applicable visibility related requirements of CAA Section 110(a)(2) including, but not limited to 110(a)(2)(D)(i)(II) and 110(a)(2)(J), relating to visibility protection for the 1997 8-Hour Ozone NAAQS and the 1997 and 2006 PM<sub>2.5</sub> NAAQS. EPA has determined that once the Regional Haze Plan submitted by the State of West Virginia is fully approved it will satisfy the requirements of the CAA. EPA is taking this action pursuant to those provisions of the CAA. EPA is soliciting public comments on the issues discussed in this document. These comments will be considered before taking final action.

## VII. Statutory and Executive Order Reviews

### 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 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. U.S. EPA*, 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

#### *D. Unfunded Mandates Reform Act*

Under sections 202 of the Unfunded Mandates Reform Act 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 the approval action proposed 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.” This proposed rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments. Thus, Executive Order 13175 does not apply to this rule.

#### *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*

Section 12 of the National Technology Transfer and Advancement Act (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.

The EPA believes that VCS are inapplicable to this action. Today’s limited approval and limited disapproval of the West Virginia Regional Haze SIP 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 oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Volatile organic compounds.

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

Dated: July 6, 2011.

**W.C. Early,**

*Acting Regional Administrator, Region III.*

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