6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2010-0935, FRL-9677-9]

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a limited approval of two revisions to the Florida state implementation plan (SIP) submitted by the State of Florida through the Florida Department of Environmental Protection (FDEP) on March 19, 2010, and August 31, 2010. Additionally, EPA is proposing a limited approval of a draft SIP revision submitted by FDEP on April 13, 2012, for parallel processing. Collectively, these three SIP revisions address regional haze for the first implementation period. Specifically, these SIP revisions address the requirements of the Clean Air Act (CAA or Act), and EPA's rules that require states to prevent any future and remedy any existing anthropogenic impairment of visibility in mandatory Class I areas (national parks and wilderness areas) caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the "regional haze program"). States are required to assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. EPA is proposing a limited approval of these SIP revisions to implement the regional haze requirements for Florida on the basis that these revisions, as a whole, strengthen the Florida SIP. Previously, EPA proposed a limited disapproval of the Florida regional haze SIP because of deficiencies in Florida's regional haze SIP arising from the remand by the U.S.

Court of Appeals for the District of Columbia Circuit (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). Consequently, EPA is not proposing to take action in this rulemaking to address the State's reliance on CAIR to meet certain regional haze requirements.[1]

DATES: Comments must be received on or before [insert date 30 days from the date of publication in the Federal Register].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R04-OAR-2010-0935, by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: R4-RDS@epa.gov.
3. Fax: 404-562-9019.
4. Mail: EPA-R04-OAR-2010-0935, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960.
5. Hand Delivery or Courier: Lynorae Benjamin, Chief, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding federal holidays.

[1] See footnote 4 for further information.

Instructions: Direct your comments to Docket ID No. "EPA-R04-OAR-2010-0935." EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through www.regulations.gov or e-mail, information that you consider to be CBI or otherwise protected. The 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 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. For additional information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket: All documents in the electronic docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form.

Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding federal holidays.

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

SUPPLEMENTARY INFORMATION:

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I. National Technology Transfer and Advancement Act (NTTAA)

I. What Action is EPA Proposing to Take?

EPA is proposing a limited approval of two Florida SIP revisions submitted by FDEP on March 19, 2010, and August 31, 2010. Today, EPA is also proposing a limited approval of a draft SIP revision submitted by FDEP on April 13, 2012, for parallel processing. See section II of this proposed rulemaking for more detail on parallel processing. These three SIP revisions address regional haze requirements for Florida under CAA sections 301(a) and 110(k)(3). EPA is proposing a limited approval of these SIP revisions because the revisions, as a whole strengthen, the Florida SIP. Throughout this document, references to Florida's (or FDEP's or the State's) "regional haze SIP" refer to Florida's original March 19, 2010, regional haze SIP revision, as later supplemented in a SIP revision submitted August 31, 2010, and in a draft SIP

revision dated April 13, 2012.[2] This proposed rulemaking explains the basis for EPA's proposed limited approval action.[3]

In a separate action, EPA has previously proposed a limited disapproval of the Florida regional haze SIP because of deficiencies in the State's regional haze SIP arising from the State's reliance on CAIR to meet certain regional haze requirements. *See* 76 FR 82219 (December 30, 2011). EPA is not proposing to take action in today's rulemaking on issues associated with Florida's reliance on CAIR in its regional haze SIP.[4] EPA will address this in a separate rulemaking.

II. What is Parallel Processing?

Parallel processing refers to a concurrent state and federal proposed rulemaking action. Generally under this process, the state submits a copy of the proposed SIP revisions to EPA before conducting its public hearing. *See*, e.g., 40 CFR part 51, Appendix V. EPA reviews this

[2] The April 13, 2012, draft SIP revision evaluates BART and reasonable progress provisions for several of Florida's EGUs.

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

[4] Florida's SIP revisions rely on CAIR to address BART requirements related to both nitrogen oxides (NOx) and sulfur dioxide (SO_2). However, EPA's replacement rule for CAIR (i.e., the "Transport Rule," also known as the Cross-State Air Pollution Rule) includes Florida only in the trading program to cover NOx. States such as Florida that are subject to the requirements of the Transport Rule trading program only for NOx must still address BART for SO_2 and other visibility impairing pollutants. On December 30, 2011, EPA proposed a limited disapproval of the Florida regional haze SIP because of deficiencies in the State's regional haze SIP arising from the State's reliance on CAIR to meet certain regional haze requirements. In that action, EPA also proposed to issue a federal implementation plan (FIP) to address the deficiencies in Florida's SIP associated with the BART requirements for NOx for electrical generating units (EGUs) based on EPA's proposed revisions to the RHR allowing states to substitute participation in the trading programs under the Transport Rule for source-specific BART. However, EPA did not propose a plan to address the deficiencies associated with the BART requirements for SO_2 since the Transport Rule does not cover SO_2 emissions from Florida EGUs. Because Florida also relied on CAIR in assessing the need for emissions reductions for SO_2 from EGUs to satisfy BART requirements, the State is currently re-evaluating EGUs with respect to SO_2 BART requirements.

proposed state action and prepares a notice of proposed rulemaking. EPA publishes this notice of proposed rulemaking in the Federal Register and solicits public comment during approximately the same time frame during which the state is holding its public hearing. The state and EPA thus provide for public comment periods on both the state and the federal actions in parallel.

As mentioned above, on April 13, 2012, Florida submitted a draft regional haze SIP revision along with a request for parallel processing. Florida provided the SIP revision for public comment on April 13, 2012, but the State has not yet finalized the SIP revision. Through today's proposed rulemaking, EPA is proposing parallel limited approval for this draft SIP revision.

Once the April 13, 2012, revision is state-effective, Florida will need to provide EPA with a formal SIP revision request to incorporate the revision into the Florida SIP. After Florida submits the formal SIP revision request (including a response to any public comments raised during the State's public participation process), EPA will evaluate any changes to the SIP revision from what is proposed in today's action. If any such changes are found by EPA to be significant, the Agency intends to re-propose the action based upon the revised submission. If the changes render the SIP revision not approvable, EPA would re-propose the action as a disapproval of the revision. If there are no significant changes, EPA will prepare a final rulemaking notice for the SIP revision.

The FDEP-requested parallel processing allows EPA to begin to take action on the State's draft SIP revision in advance of the submission of the formal SIP revision. As stated above, the final rulemaking action by EPA will occur only after the SIP revision has been: (1) adopted by Florida, (2) evaluated for changes, and (3) submitted formally to EPA for incorporation into the SIP.

III. What is the Background for EPA's Proposed Action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particles ($PM_{2.5}$) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), and their precursors (e.g., SO_2, NOx, and in some cases, ammonia (NH_3) and volatile organic compounds (VOC)). Fine particle precursors react in the atmosphere to form fine particulate matter which impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range[5] in many Class I areas[6] (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

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

[6] Areas designated as mandatory Class I areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. *See* 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. *See* 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. *See* 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I area is the responsibility of a "Federal Land Manager." *See* 42 U.S.C. 7602(i). When the term "Class I area" is used in this action, it means a "mandatory Class I Federal area."

United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. *See* 64 FR 35715 (July 1, 1999).

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

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

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35713), the RHR. The RHR revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section IV of this preamble. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and

the Virgin Islands.[7] 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

[7]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).

Carolina, South Carolina, Tennessee, Virginia, West Virginia, and the Eastern Band of the Cherokee Indians.

IV. 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.[8]

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

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

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

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) (hereinafter referred to as "EPA's 2003 Tracking Progress Guidance").

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

C. Determination of Reasonable Progress Goals (RPGs)

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two RPGs (i.e., two distinct goals, one for the "best" and one for the "worst" days) for every Class I area for each (approximately) 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for "reasonable

progress" toward achieving natural (i.e., "background") visibility conditions. In setting RPGs, states must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP and ensure no degradation in visibility for the least impaired days over the same period.

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

D. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources[9] built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology" as determined by the state. Under the RHR, states are directed to conduct BART determinations for such "BART-eligible" sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART.

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

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO_2, NOx, and

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

PM. EPA has stated that states should use their best judgment in determining whether VOC or NH_3 compounds impair visibility in Class I areas.

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

In their SIPs, states must identify potential BART sources, described as "BART-eligible sources" in the RHR, and document their BART control determination analyses. In making BART determinations, section 169A(g)(2) of the CAA requires that states consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance to be assigned to each factor.

A regional haze SIP must include source-specific BART emissions limits and compliance schedules for each source subject to BART. Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the regional haze SIP. *See* CAA section

169(g)(4); 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_2 and NOx. *See* 40 CFR 51.308(e)(4). Because CAIR did not address direct emissions of PM, states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant. Challenges to CAIR, however, resulted in the remand of the rule to EPA. *See North Carolina* v. *EPA*, 550 F.3d 1176 (D.C. Cir. 2008).

EPA issued a new rule in 2011 to address the interstate transport of NOx and SO_2 in the eastern United States. *See* 76 FR 48208 (August 8, 2011) ("the Transport Rule," also known as the Cross-State Air Pollution Rule). On December 30, 2011, EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would BART in the states in which the Transport Rule applies. *See* 76 FR 82219. Based on this proposed finding, EPA also proposed to revise the RHR to allow states to substitute participation in the trading programs under the Transport Rule for source-specific BART. EPA has not yet taken final action on that rule. Also on December 30, 2011, the D.C.

Circuit issued an order addressing the status of the Transport Rule and CAIR in response to motions filed by numerous parties seeking a stay of the Transport Rule pending judicial review. In that order, the D.C. Circuit stayed the Transport Rule pending the court's resolutions of the petitions for review of that rule in *EME Homer Generation, L.P. v. EPA* (No. 11-1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer CAIR in the interim until the court rules on the petitions for review of the Transport Rule.

E. 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 emissions reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to

sufficiently address interstate visibility issues. This is especially true where two states belong to different RPOs.

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

F. Coordinating Regional Haze and 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 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.

V. What is EPA's Analysis of Florida's Regional Haze SIP Revisions?

On March 19, 2010, FDEP submitted a revision to the Florida SIP to address regional haze requirements as required by EPA's RHR. On August 31, 2010, FDEP submitted an additional SIP revision to address regional haze requirements. Specifically, Florida's August 31, 2010, SIP revision adopted amendments to rescind its Reasonable Progress Control Technology Rule and to modify its technical justification to rely on CAIR and the Industrial Boiler Maximum Achievable Control Technology (MACT) rule. Further, on April 13, 2012, FDEP submitted a draft SIP revision to evaluate BART and reasonable progress provisions for several of Florida's EGUs.

A. Affected Class I Areas

Florida has three Class I areas where visibility is an important value within its borders: Everglades National Park, Chassahowitzka Wilderness Area, and Saint (St.) Marks Wilderness Area. Florida is responsible for developing a regional haze SIP that addresses these Class I areas and for consulting with other states whose sources impact the areas.

The Florida regional haze SIP establishes RPGs for visibility improvement at Everglades National Park, Chassahowitzka Wilderness Area, and St. Marks Wilderness Area, and a LTS to achieve those RPGs within the first regional haze implementation period. In developing the LTS for the areas, Florida considered both emissions sources inside and outside of Florida that may

cause or contribute to visibility impairment in Florida's Class I areas. The State also identified and considered emissions sources within Florida 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 Class I areas in Florida and those areas affected by emissions from Florida.

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

As required by the RHR and in accordance with EPA's 2003 Natural Visibility Guidance, Florida calculated baseline/current and natural visibility conditions for 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.[10] 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. Florida opted to use this refined approach, referred to as the "new IMPROVE equation," for its Class I areas.

Natural visibility conditions using the new IMPROVE equation were calculated separately for each Class I area by VISTAS. 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.

The new IMPROVE equation takes into account the most recent review of the science[11] 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

[10] 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.

[11] The science behind the revised IMPROVE equation is summarized in Appendix B.2 of the March 19, 2010, Florida 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; 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.

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

FDEP estimated baseline visibility conditions at Florida's Class I areas using available monitoring data from IMPROVE monitoring sites in Everglades National Park, Chassahowitzka Wilderness Area, and St. Marks Wilderness Area. IMPROVE data records for the Everglades had four years of complete data and no substitution of data was made. However, Chassahowitzka and St. Marks both required data substitution to make their records complete. This substitution was made in accordance with EPA guidance for tracking progress which can be found at http://www.epa.gov/ttn/oarpg/t1/memoranda/rh_tpurhr_gd.pdf. As explained in section IV.B, baseline visibility conditions are the same as current conditions for the first regional haze SIP. A five-year average of the 2000 to 2004 monitoring data was calculated for each of the 20 percent worst and 20 percent best visibility days at the Florida Class I areas. Appendix B of the Florida regional haze SIP presents the data and calculations for the 20 percent best and worst days for the baseline period of 2000-2004 for the three Class I areas in Florida. This data is also provided at the following website: http://www.metro4-sesarm.org/vistas/SesarmBext_20BW.htm.

3. Summary of Baseline and Natural Conditions

Baseline visibility on the 20 percent worst days is better at Everglades (22.3 deciviews) than Chassahowitzka (25.7 deciviews) or St. Marks (26.3 deciviews). On the other hand, natural background visibility is slightly worse for Everglades (12.1 deciviews) than either Chassahowitzka (11.0 deciviews) or St. Marks (11.7 deciviews). The natural and baseline conditions for Florida'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 Florida Class I Areas

Class I areas	Average for 20 percent Worst Days (dv[12])	Average for 20 percent Best Days (dv)
Natural Background Conditions		
Everglades National Park	12.1	5.2
Chassahowitzka Wilderness Area	11.0	5.9
St. Marks Wilderness Area	11.7	5.4
Baseline Visibility Conditions (2000-2004)		
Everglades National Park	22.3	11.7
Chassahowitzka Wilderness Area	25.7	15.5
St. Marks Wilderness Area	26.3	14.4

4. Uniform Rate of Progress

In setting the RPGs, Florida 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.

[12] The term, "dv," is the abbreviation for "deciview."

Florida's SIP presents two sets of graphs for its Class I areas, one for the 20 percent best days and one for the 20 percent worst days. Florida 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 areas. For the best days, the graph includes a horizontal, straight line spanning from baseline conditions in 2004 out to 2018 to depict no degradation in visibility over the implementation period of the SIP. Florida'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 Everglades National Park, the overall visibility improvement necessary to reach natural conditions is the difference between baseline visibility of 22.30 deciviews for the 20 percent worst days and natural conditions of 12.09 deciviews, i.e., 10.21 deciviews. Over the 60-year period from 2004 to 2064, this would require an average improvement of 0.170 deciview 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 Everglades National Park, Florida would need to project at least 2.380 deciviews over the first implementation period (i.e., 0.170 deciview x 14 years = 2.380 deciviews) of visibility improvement from the 22.3 deciviews baseline in 2004, resulting in visibility levels at or below 19.92 deciviews in 2018. Similarly, Chassahowitzka Wilderness Area would need a 0.245 deciview annual improvement over the 14-year first implementation period or 3.435 deciview improvement from a baseline of 25.75 deciviews to 22.31 deciviews in

2018 and St. Marks Wilderness Area would need a 0.244 deciview annual improvement over the 14-year first implementation period or 3.416 deciview improvement from a baseline of 26.31 deciviews to 22.89 deciviews in 2018.

C. Long-Term Strategy/Strategies

As described in section IV.E of this action, the LTS is a compilation of state-specific control measures relied on by the state for achieving its RPGs. Florida'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 Florida LTS was developed by the State, in coordination with the VISTAS RPO, through an evaluation of the following components: (1) identification of the emissions units within Florida and in surrounding states that likely have the largest impacts currently on visibility at the State's 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 emissions units to determine if additional reasonable controls were required.

In a separate action proposing limited disapproval of the regional haze SIPs of a number of states, EPA noted that these states relied on the trading programs of CAIR to satisfy the BART requirement and the requirement for a LTS sufficient to achieve the state-adopted reasonable progress goals. *See* 76 FR 82219 (December 30, 2011). In that action, EPA proposed a limited disapproval of Florida's regional haze SIP submittal insofar as the SIP relied on CAIR.

For that reason, EPA is not taking action on that aspect of Florida's regional haze SIP in this action.

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

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

biogenic sources (which are natural sources of emissions, such as trees). On-road mobile source emissions are estimated by vehicle type and road type, and are summed to the countywide level.

There are many federal and state control programs being implemented that VISTAS and Florida anticipate will reduce emissions between the end of the baseline period and 2018. Emissions reductions from these control programs are projected to achieve substantial visibility improvement by 2018 in the Florida Class I areas. The control programs relied upon by Florida include CAIR; EPA's NO_X SIP Call; North Carolina's Clean Smokestacks Act; consent decrees for Tampa Electric, Virginia Electric and Power Company, Gulf Power-Plant Crist; NOx and/or VOC reductions from the control rules in 1-hour ozone SIPs for Atlanta, Birmingham, and Northern Kentucky; North Carolina's NO_X Reasonably Available Control Technology rule for Philip Morris USA and Norandal USA in the Charlotte/Gastonia/Rock Hill 1997 8-hour ozone nonattainment area; federal 2007 heavy duty diesel engine standards for on-road trucks and buses; federal Tier 2 tailpipe controls for on-road vehicles; federal large spark ignition and recreational vehicle controls; and EPA's non-road diesel rules. Controls from various federal 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.

Effective July 30, 2007, the D.C. Circuit mandated the vacatur and remand of the Industrial Boiler MACT Rule.[13] This MACT was vacated since it was directly affected by the vacatur and remand of the Commercial and Industrial Solid Waste Incinerator Definition Rule. EPA proposed a new Industrial Boiler MACT rule to address the vacatur on June 4, 2010, (75 FR 32006) and issued a final rule on March 21, 2011 (76 FR 15608). The VISTAS modeling

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

included emissions reductions from the vacated Industrial Boiler MACT rule, and Florida did not redo its modeling analysis when the rule was re-issued. Even though Florida's modeling is based on the vacated Industrial Boiler MACT limits, the State's modeling conclusions are unlikely to be affected because the expected reductions due to the vacated rule were relatively small compared to the State's total SO_2, $PM_{2.5}$, and coarse particulate matter (PM_{10}) emissions in 2018 (i.e., 0.1 to 2.5 percent, depending on the pollutant, of the projected 2018 SO_2, $PM_{2.5}$, and PM_{10} inventory). Thus, EPA does not expect that differences between the vacated and final Industrial Boiler MACT emissions limits would affect the adequacy of the existing Florida regional haze SIP. If there is a need to address discrepancies between projected emissions reductions from the vacated Industrial Boiler MACT and the Industrial Boiler MACT issued March 21, 2011 (76 FR 15608), EPA expects Florida to do so in the State's five-year progress report.

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

Table 2: 2002 Emissions Inventory Summary for Florida (tons per year (tpy))

	VOC	**NO_x**	**$PM_{2.5}$**	**PM_{10}**	**NH_3**	**SO_2**
Point	40,995	302,833	46,147	57,244	1,657	518,721
Area	404,302	28,872	58,878	443,346	37,446	40,491
On-Road Mobile	520,757	460,503	7,779	11,148	17,922	20,687
Off-Road Mobile	272,072	180,627	17,415	18,281	134	20,614
Fires	42,724	15,942	75,717	85,263	3,102	4,057
Biogenic	1,522,031	36,320	0	**0**	0	0
Total	**2,802,881**	**1,025,097**	**205,936**	**615,282**	**60,261**	**604,570**

Table 3: 2018 Emissions Inventory Summary for Florida (tpy)

	VOC	NO_x	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	45,233	126,542	46,316	56,478	4,805	213,387
Area	489,975	30,708	72,454	578,516	40,432	38,317
On-Road Mobile	219,554	148,486	3,994	8,178	25,885	2,506
Off-road Mobile	183,452	127,885	11,868	12,497	171	7,536
Fires	51,527	19,791	88,756	98,470	3,157	4,129
Biogenic	1,522,031	36,320	0	0	0	0
Total	**2,511,772**	**489,732**	**223,388**	**754,139**	**74,450**	**265,875**

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 Florida. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. VISTAS used the following modeling system:

- Meteorological Model: The Pennsylvania State University/National Center for Atmospheric Research Mesoscale Meteorological Model is a nonhydrostatic, prognostic, meteorological model routinely used for urban- and regional- scale photochemical, $PM_{2.5}$, and regional haze regulatory modeling studies.
- Emissions Model: The Sparse Matrix Operator Kernel Emissions modeling system is an emissions modeling system that generates hourly gridded speciated 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 12x12 kilometer cells that covers the 10 VISTAS states (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia) and states adjacent to them. This grid is nested within a larger national CMAQ modeling grid of 36x36 kilometer grid cells that covers the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. Selection of a representative period of meteorology is crucial for evaluating baseline air quality conditions and projecting future changes in air quality due to changes in emissions of visibility-impairing pollutants. VISTAS conducted an in-depth analysis which resulted in the selection of the entire year of 2002 (January 1-December 31) as the best period of meteorology available for conducting the CMAQ modeling. The VISTAS states modeling was developed consistent with EPA's *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze*, located at http://www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf, (EPA-454/B-07-002), April 2007, and the 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), Florida 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 proposes to agree with the VISTAS model performance procedures and results, and that CMAQ is an appropriate tool for the regional haze assessments for the Florida 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 $PM_{2.5}$ mass and visibility impairment at Class I areas in the VISTAS and neighboring states. On the 20 percent worst visibility days in 2000-2004, ammonium sulfate accounted for 75 to 87 percent of the calculated light extinction at the inland Class I areas in VISTAS, and 69 to 74 percent of the calculated light extinction for all but one of the coastal Class I areas in the VISTAS states. In contrast, ammonium nitrate contributed five percent or less of the calculated light extinction at the VISTAS Class I areas on the 20 percent worst visibility days. Particulate organic matter (organic carbon) accounted for 20 percent or less of the light extinction on the 20 percent worst visibility days at the VISTAS Class I areas. In particular, for Chassahowitzka and St. Marks Wilderness Areas, sulfate particles resulting from SO_2 emissions contribute roughly 71 percent to the calculated light extinction on the haziest days. The Everglades National Park is somewhat different than any of the other Class I areas in the VISTAS area with a greater relative influence from organic carbon. The ammonium sulfate contribution, while still significant, was only 40 percent of the calculated light extinction on the haziest days while organic carbon accounted for 45 percent.

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. Florida's Class I areas are "coastal" areas.

Results from VISTAS' emission sensitivity analyses indicate that sulfate particles resulting from SO_2 emissions are the dominant contributor to visibility impairment on the 20 percent worst days at all Class I areas in VISTAS, including the Florida areas. Florida concluded that reducing SO_2 emissions from EGU and non-EGU point sources in the VISTAS states would have the greatest visibility benefits for the Florida Class I areas. Because ammonium nitrate is a small contributor to $PM_{2.5}$ mass and visibility impairment on the 20 percent worst days at the coastal Class I areas in VISTAS, the benefits of reducing NO_X and NH_3 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 Florida. The sensitivity analyses also show that reducing organic carbon from point sources, ground level sources, or fires is projected to have small to no visibility benefit at the VISTAS Class I areas.

Florida considered the factors listed in under 40 CFR 51.308(d)(3)(v) and in section IV.E of this action to develop its LTS as described below. Florida, 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 Florida. Florida considered agricultural and forestry smoke management techniques to address visibility impacts from elemental carbon. With regard to smoke management, Florida has a certified Smoke Management Plan (SMP) meeting the intent of EPA's 1998 *Interim Air Quality Policy on Wildland and Prescribed Fires* available at: http://www.epa.gov/ttncaaa1/t1/memoranda/firefnl.pdf. EPA Region 4 acknowledged receipt of this SMP and its certification in February 2002. The SMP follows the requirements for such a plan contained in EPA's *Interim Air Quality Policy on Wildland and Prescribed Fires*. The Florida Division of Forestry operates a burn authorization program that considers the potential for smoke from the burn impacting smoke sensitive receptors (e.g., airports, roads, hospitals, urban areas). The SMP provides alternatives for burning and is considerate of minimizing air pollutants. With regard to fine soils, the State considered those activities that generate fugitive dust, including construction activities. With regard to the impact of construction activities, rule 62-296.320, F.A.C., General Pollution Emission Limiting Standards, addresses construction related activities. In particular, section (4)(c) of the rule, Unconfined Emissions of Particulate Matter, provides that reasonable precautions be taken to prevent or eliminate emissions. For example, the rule addresses paving and maintenance of roads, parking areas, and yards and the application of water or chemicals to control emissions during construction. With regard to ammonia, the State has chosen not to develop controls for ammonia emissions from Florida sources in this first implementation period because of its relatively minor contribution to visibility impairment. EPA proposes to concur 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, proposes to find that Florida has adequately satisfied 40 CFR 51.308(d)(3)(v).

The emissions sensitivity analyses conducted by VISTAS predict that reductions in SO_2 emissions from EGU and non-EGU industrial point sources will result in the greatest improvements in visibility in the Class I areas in the VISTAS region, more than any other controllable visibility-impairing pollutant. The VISTAS sensitivity analysis projects visibility benefits in all three of Florida's Class I areas from SO_2 reductions from EGUs in nearby VISTAS states. Additional, smaller benefits are projected from SO_2 emissions reductions from non-utility industrial point sources. SO_2 emissions contributions to visibility impairment from other RPO regions are substantial in comparison to the VISTAS states' contributions, and thus, controlling sources outside of the VISTAS region is predicted to provide significant improvements in visibility in the Class I areas in VISTAS.

Taking the VISTAS sensitivity analyses results into consideration, Florida concluded that the greatest visibility benefits on the 20 percent worst days for the Florida Class I areas and Okefenokee in Georgia are projected to result from further reducing SO_2 from EGUs. The Everglades is somewhat different than any of the other Class I areas in the VISTAS area with a greater relative influence from carbon (VOC) and boundary conditions. Contributions from other RPOs are comparatively small, and the greatest benefits would likely be from further EGU reductions within Florida, Georgia, and Alabama. Additional benefits are projected from SO_2 emission reductions from non-utility, industrial point sources. The pattern of relative SO_2 contributions from non-EGUs among the various VISTAS states is similar to the pattern of relative SO_2 contributions from EGUs. The State chose to focus solely on evaluating certain SO_2 sources contributing to visibility impairment to the State's Class I areas for additional emissions

reductions for reasonable progress in this first implementation period (described in sections V.C.4 and V.C.5 of this action). EPA proposes to agree with the State's analyses and conclusions used to determine the pollutants and source categories that most contribute to visibility impairment in the Class I areas, and proposes to find the State's approach to focus on developing a LTS that includes largely additional measures for point sources of SO_2 emissions to be appropriate.

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

4. Procedure for Identifying Sources to Evaluate for Reasonable Progress Controls in Florida and Surrounding Areas

As discussed in section V.C.3 of this action, through comprehensive evaluations by VISTAS and the Southern Appalachian Mountains Initiative (SAMI),[14] the VISTAS states concluded that sulfate particles resulting from SO_2 emissions account for the greatest portion of

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

the regional haze affecting the Class I areas in VISTAS states, including those in Florida. Utility and non-utility boilers are the main sources of SO_2 emissions within the southeastern United States. VISTAS developed a methodology or criteria for Florida, which enables the State to focus its reasonable progress analysis on those geographic regions and source categories that impact visibility at its Class I areas.

Florida used the VISTAS criteria as a starting point for developing its own methodology. For reasons of better public clarity and understanding, Florida chose to develop a reasonable progress source selection metric of emissions (Q) divided by distance (d) from the Class I area or "Q/d" (i.e., 2002 SO_2 emissions in tons/distance in kilometers) that would have the effect of selecting a set of source units similar to that selected using the VISTAS criteria.

Since visibility in Class I areas in or near Florida is expected to improve at very near the uniform rate of progress with current rules, Florida chose a minimum threshold for reasonable evaluation of sources of Q/d = 50. Sources of SO_2 with a Q/d greater than or equal to 50 ("$Q/d \geq 50$") were considered eligible for a reasonable progress control evaluation. Use of this threshold to identify sources for evaluation for potential control under reasonable progress assures that many of the largest Florida sources of SO_2 nearest Class I areas are required to determine reasonable progress, while smaller sources (not expected to provide significant, cost-effective reductions) are excluded. Similarly, Florida provided some bounds in the rule for emissions (Q) and distance (d) to affect which sources would be subject to a reasonable process analysis. First, Florida exempts small (less than 250 tpy SO_2) units, the rationale being that any emissions reductions would be very small and likely not very cost effective. Second, Florida does not consider any sources outside of 300 kilometers from a Class I area. This threshold is consistent with the bounds used in the BART exemption analysis where only sources within this distance from a Class I area were considered. Third, Florida only considered sources that commenced

construction or submitted a complete application prior to August 30, 1999, a date after which Florida permit review requires that visibility specifically be addressed. Florida concluded that any sources permitted after that 1999 date had already performed the equivalent of a reasonable progress review as part of its permitting process. Finally, Florida used the 2002 emissions for Q in the Q/d analysis, whereas VISTAS used the projected 2018 emissions. This is important in Florida for two reasons. First, Florida updated some of the model projections concluding that many Florida utilities will convert all of their oil-fired boilers to natural gas with source-specific information to reflect current plans of these utilities. Second, Florida preferred to start with the known largest sources having the potential to impair visibility and make sure that these sources are addressed through reasonable progress rather than base its selection of sources for a reasonable progress control analysis on a model estimate of how emissions might be distributed.

The Florida criterion ($Q/d \geq 50$) captures for reasonable progress analyses the 1st through 9th, 15th, 18th, 19th, 27th, and 30th largest SO_2 sources (2002) in the State. When compared to the VISTAS criteria, Florida's methodology captured 67.6 percent of the total point source SO_2 contribution to visibility impairment in the VISTAS area of influence around each of the Class I areas, while the VISTAS criteria would require 70.5 percent of these SO_2 emissions to be reviewed. EPA believes the approach developed by Florida for the Class I areas in Florida 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. EPA proposes that the State's approach is consistent with EPA's Reasonable Progress Guidance and believes that the technical approach of Florida was objective and based on several analyses and compares well to the VISTAS methodology.

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

FDEP identified 32 emissions units at 14 facilities in Florida (see Table 4) with SO_2 emissions that were above the state's minimum threshold for reasonable progress evaluation because they were modeled to have a Q/d of at least 50. Thirty-one of these 32 emissions units are EGUs that were already subject to CAIR. The reasonable progress analysis for these units is discussed in section IV.C.5.B of this action. FDEP identified only one unit not subject to CAIR at Rock Tenn that has a Q/d of at least 50.

Table 4: Facilities Subject to Reasonable Progress Analysis

Facilities With Unit(s) Not Subject to CAIR
Rock Tenn (Jefferson Smurfit) unit 15
Facilities With Unit(s) Subject to CAIR
City of Gainesville Deerhaven unit 5
Florida Crushed Stone (Central Power and Lime) unit 18
FP&L Manatee units 1, 2
FL&L Port Everglades units 3, 4
FP&L Turkey Point units 1, 2
Gulf Power Crist unit 7
Lakeland Electric CD McIntosh unit 6
JEA Northside/SJRPP units 3, 16, 17, 27
Progress Energy Anclote units 1, 2
Progress Energy Bartow units 1, 2, 3
Progress Energy Crystal River units 1, 2, 3, 4
Seminole Electric Cooperative units 1, 2
Tampa Electric Gannon units 1, 2, 3, 4, 5, 6

In its April 13, 2012, amendment, as summarized in Table 5, FDEP documented that nine of the identified EGUs have shut down, two others will be shut down by December 31, 2013, and two others have taken Federally enforceable permit limits that reduce their contribution to

regional haze below Florida's threshold for reasonable progress analysis. The remaining 19 units will be addressed in later actions.

Table 5: Facilities with Unit(s) Subject to CAIR that Have Shut Down, Will Shut Down by December 31, 2013, or that Have Accepted Enforceable Emissions Limits

Shut Down
Progress Energy Bartow units 1, 2, 3
Tampa Electric Gannon units 1, 2, 3, 4, 5, 6
To Be Shut Down by December 31, 2013
FP&L Port Everglades units 3, 4
Not Subject to Reasonable Progress Analysis Due to Enforceable Emissions Limits
Florida Crushed Stone unit 18
JEA Northside unit 27

a. Facilities with Unit(s) Not Subject to CAIR

Florida chose to rely on the Industrial Boiler MACT, which was promulgated on March 21, 2011 (76 FR 15608),[15] in the reasonable progress analysis at Rock Tenn (Smurfit Stone) unit 15. This rule will require reductions in acid gases that will have the co-benefit of reducing SO_2 emissions either through the use of scrubbers or fuel switching. The Rock Tenn (formerly Smurfit-Stone and Jefferson Smurfit) facility in Fernandina Beach, one of the listed reasonable progress sources subject to reasonable progress analysis, is subject to the Industrial Boiler MACT rule.

The State's demonstration is a streamlined control analysis showing that regulations requiring the most stringent level of controls have been adopted for unit 15, and thus, the State

[15] Although EPA stayed the Industrial Boiler MACT rule pending reconsideration of additional data, EPA expects to take final action to address this data by the end of May 2012. A revised proposal was published December 23, 2011. 76 FR 80598. The stay does not affect any of the conclusions related to reasonable progress.

did not review the remaining statutory factors for reasonable progress.[16] Florida concluded that any source subject to MACT standards must meet a level of control that is as stringent as the best-controlled 12 percent of sources in the industry. In this case, although the MACT standard is for acid gases rather than for SO_2, FDEP concluded that it is unlikely that the State will identify SO_2 emission controls more stringent than what the MACT standards will require that would be considered reasonable for this facility under reasonable progress.

Since the industrial boiler MACT standard only addresses SO_2 as a co-benefit, EPA would not ordinarily rely on the industrial boiler MACT standard in lieu of a more formal analysis. Therefore, EPA reviewed the supporting documentation regarding the emissions controls projected necessary to comply with the MACT standard for this unit. The facility can pursue a number of options, including Dry Sorbent Injection/Fabric Filter (DIFF), wet scrubbing, or conversion to natural gas to meet the MACT standards. The supporting technical information document for the industrial boiler MACT standard concluded that the least cost option for this unit to meet the MACT standard would be DIFF, and projected the need to install DIFF with a total capital control cost of $35,244,447 and a total annual control cost of $10,084,579.[17] SO_2 emissions are projected to be reduced 68.6 percent. A wet scrubber, which was not projected to be needed to meet the MACT standard for this unit, could reduce emissions by 95 percent, although at a significantly higher cost.

From Florida's reasonable progress assessment, it appears that the 2002 emissions for this unit were 3,242 tons of SO_2 per year and the Q/d was 50.2, just over Florida's threshold of

[16] The BART Guidelines specifically address consideration of MACT standards and streamlined control analyses when the most stringent controls are in place. 70 FR 39163, 39165. Although this facility was evaluated for reasonable progress rather than BART, many of the same considerations are appropriate.

[17] Industrial/Commercial/Institutional Boilers and Process Heaters (Docket# EPA-HQ-OAR-2002-0058), Boiler MACT/Impacts Memo & Appendices, Appendix A-3: Existing Major Source Boiler and Process Heater Cost Detail (Recommended Option), http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

50 for RP during this planning period. Based on the expected reduction of 68.6 percent from this baseline, the facility would reduce actual emissions by 2,224 tons per year. The resulting estimated cost effectiveness of DIFF for SO_2 is over $4,500 per ton of SO_2 removed for this facility. Further, installation of this control technology would bring the facility's Q/d well below FDEP's threshold of 50. While a wet scrubber would result in a greater emissions reduction, its annual costs are anticipated to be substantially higher and less cost effective. Accordingly, EPA proposes to approve Florida's approach for the Rock Tenn (Smurfit –Stone) facility in Fernandina Beach as being appropriate for this facility for reasonable progress during this planning period because EPA proposes to agree that it will be unlikely that even if Florida prepared a four factor analysis, it would identify SO_2 emission controls that are more stringent than what the MACT standards will require. EPA expects the state to review the status of the facility's progress toward installing SO_2 controls as part of the five-year interim progress reporting requirements.

b. Facilities With Unit(s) Subject to CAIR

Thirty-one of the 32 emissions units identified for a reasonable progress control analysis are EGUs. Two of these units, Florida Crushed Stone (Central Power and Lime) unit 18 and JEA Northside unit 27, have taken federally enforceable permit conditions that limit SO_2 emissions so that they are not subject to reasonable progress analysis. Florida Crushed Stone (Central Power and Lime) unit 18 is a coal-fired power plant which is being converted to a biomass fired boiler. It has received a construction permit that will prohibit the firing of coal once it is converted. Start up, shut down, and bed stabilization will use ultra low sulfur distillate oil. The maximum allowed annual SO_2 emissions are now limited to 591.3 tpy.

JEA Northside unit 27 is a circulating fluidized bed boiler. In 2009, this facility received a federally enforceable permit condition that limits emissions to 0.2 pounds per million British Thermal Units (lb/MMBtu) on a 24-hour average and 0.15 lb/MMBtu on a 30-day rolling average resulting a maximum annual emission rate of 1,816 tons. These limits reduce the Q/d to 26.4 and 26.2, respectively, for the two emissions limits identified above. Hence, Florida determined that the unit does not require a reasonable progress control analysis.

Eleven EGUs are either shut down or will be shut down by December 31, 2013. The remaining 18 EGUs, located at ten facilities, are: City of Deerhaven unit 5; FP&L Manatee units 1, 2; FP&L Turkey Point units 1, 2; Gulf Power Crist unit 7; JEA Northside/SJRPP unit 3; Lakeland Electric CD McIntosh unit 6; Progress Energy Anclote units 1, 2; Progress Energy Crystal River units 1, 2, 3, 4; St. Johns River units 16, 17; and Seminole Electric Cooperative units 1, 2.

Florida evaluated the SO_2 reductions expected from the EGU sector in its submittal to determine whether any additional controls beyond those required by CAIR would be considered reasonable for Florida's EGUs for the first implementation period. All EGU sources identified as subject to reasonable progress review were also subject to CAIR. For EGUs subject to CAIR, Florida relied on EPA's evaluation of a number of factors, including the cost of compliance and the time necessary for compliance. In the CAIR, EPA determined that the earliest reasonable deadline for compliance with the final highly cost effective control levels for reducing emissions was 2015 (70 FR 25197-25198, May 12, 2005). Florida believes that the cost of compliance and the time necessary for compliance are the dominant factors for determining if additional reductions would be reasonable from CAIR sources. Based on detailed analyses in the May 12, 2005, CAIR rule, Florida concluded that CAIR controls satisfy reasonable progress for SO_2 for

the first implementation period ending in 2018. Since CAIR was developed using processes similar to the regional haze four-factor approach, Florida believes it is reasonable to accept that CAIR satisfies reasonable progress requirements for CAIR-subject sources. Since the rate of visibility improvement in all of the Class I areas in and adjacent to Florida is consistent with the uniform rate of progress, Florida asserted that reasonable progress was met for the subject sources with CAIR.

Many of the emission units subject to reasonable progress analysis, as defined above, either have already reduced SO_2 emissions or will be reducing SO_2 emissions soon. Even though CAIR is not expected to continue to be in effect indefinitely, SO_2 emissions reduction programs are well underway to meeting the amount needed to reach the 2018 projection. These reductions have come about from company decisions to shut down or re-power certain units, or to install new control equipment (scrubbers) in response to the CAIR regulations. On August 8, 2011, EPA published the Transport Rule, which replaced CAIR. As under CAIR, EPA determined in the Transport Rule that Florida is contributing to ozone air quality exceedences in other states. However, unlike CAIR, EPA determined in the Transport Rule that Florida is contributing to SO_2 exceedances in other states. As a result, the Florida facilities with EGUs that previously relied on CAIR to satisfy their reasonable progress assessment obligations for SO_2 will be neither subject to CAIR nor able to rely on its successor, the Transport Rule, to meet their reasonable progress assessment requirements.

Florida is in the process of reevaluating the reasonable progress determinations for these remaining facilities' 18 EGUs and plans to address most of them in a subsequent SIP amendment. For this reason, EPA is taking no action on the determinations for these 18 EGUs at this time. EPA will address these emissions units in separate actions.

6. BART

BART is an element of Florida'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 FDEP, are discussed as follows.

a. BART-Eligible Sources

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

The BART Guidelines also direct states to address SO_2, NO_X, and direct PM (including both PM_{10} and $PM_{2.5}$) emissions as visibility-impairment pollutants and to exercise judgment in determining whether VOC or ammonia emissions from a source impair visibility in an area. *See* 70 FR 39160. VISTAS modeling demonstrated that VOC from anthropogenic sources and ammonia from point sources are not significant visibility-impairing pollutants in Florida, as discussed in section V.C.3. of this action. FDEP has determined, based on the VISTAS modeling, that 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, Florida 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.

i. Modeling Methodology

The BART Guidelines allow states to use the CALPUFF[18] modeling system (CALPUFF) or another appropriate model to predict the visibility impacts from a single source on a Class I area, and therefore, to determine whether an individual source is anticipated to cause or contribute to impairment of visibility in Class I areas, i.e., "is subject to BART." The Guidelines state that EPA believes that CALPUFF is the best regulatory modeling application currently available for predicting a single source's contribution to visibility impairment. 70 FR 39162.

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

Florida, in coordination with VISTAS, used the CALPUFF modeling system to determine whether individual sources in Florida 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 Florida, 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. FDEP sent a letter and an e-mail to EPA on January 3, 2008, and January 11, 2008, respectively, justifying the need for this post-processing approach, and the EPA Region 4 Regional Administrator sent Florida a letter of approval dated January 17, 2008. Florida's justification included a method to process the CALPUFF output and a rationale on the benefits of using the new IMPROVE equation. The State's letter requesting approval is located in Appendix L on page 206 of the March 19, 2010, Florida regional haze SIP submittal and can be accessed at www.regulations.gov using Docket ID No. EPA-R04-OAR-2010-0935. The State's e-mail providing additional documentation and EPA Region 4's approval letter are also in the docket for this action.

ii. Contribution Threshold

For states using modeling to determine the applicability of BART to single sources, the BART Guidelines note that the first step is to set a contribution threshold to assess whether the

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

Florida used a contribution threshold of 0.5 deciview for determining which sources are subject to BART and concluded that the threshold of 0.5 deciview was appropriate in this situation. While Florida has 46 sources with BART-eligible units, they are scattered about the State and, in FDEP's judgment, are not clustered in sufficient quantity to warrant a change to the threshold value of 0.5 deciview. FDEP concluded, and EPA proposes to agree, that a 0.5 deciview threshold was appropriate in this instance and a lower threshold is not warranted.

iii. Identification of Sources Subject to BART

Florida initially identified 46 sources with BART-eligible units. Six BART-eligible sources made changes to their operation in order to exempt from further BART review. These sources are: Georgia Pacific-Palatka; Rock Tenn (Smurfit-Stone) – Fernandina Beach; Rock Tenn (Smurfit-Stone) – Panama City; Mosaic New Wales; Mosaic Riverview; and CF Industries. All of these changes have been incorporated into their air permits and are federally enforceable. Table 6 identifies the remaining 40 BART-eligible sources identified in FDEP's March 19, 2010, submittal, and of these, lists the five sources identified as subject to BART.

Table 6: Initial List of Florida BART-Eligible and Subject-to-BART Sources

Facilities With Unit(s) Subject to BART Analysis
EGUs Subject to BART[19]
Florida Power Corporation - Crystal River Power Plant (Units 1, 2) Florida Power & Light - Turkey Point Power Plant (Units 1, 2)
EGUs to be Shut Down by December 31, 2013
Tallahassee City - Purdom Generating Station (Unit 7)
Non-EGUs Subject to BART
CEMEX White Springs Agricultural Chemicals-SR/SC Complex
Facilities With Unit(s) Found Not Subject to BART
EGU CAIR and BART Modeling (PM only) Exempt Sources[20]
City of Gainesville - Deerhaven Generating Station (Unit 3) City of Vero Beach - City of Vero Beach Municipal Utilities (Units 2, 3, 4) City of Tallahassee - Arvah B.Hopkins Generating Station (Units 1, 4) Florida Power Corp. - Anclote Power Plant (Units 1, 2) Florida Power Corp. - Bartow Plant (Unit 3) Florida Power & Light - Cape Canaveral Power Plant (Units 1, 2) Florida Power & Light - Manatee Power Plant (Units 1, 2) Florida Power & Light - Martin Power Plant (Units 1, 2) Florida Power & Light - Port Everglades Power Plant (Units 3, 4) Florida Power & Light - Putnam Power Plant (Units 3, 4, 5, 6, 7, 8, 9, 10) Florida Power & Light - Riviera Power Plant (Unit 4) Gulf Power Company - Crist Electric Generating Plant (Units 6, 7) Gulf Power Company - Lansing Smith Plant (Units 1, 2) JEA Northside/ SJRPP (Unit 3) Reliant Energy Indian River - Indian River Plant (Units 2, 3) Lakeland Electric - Charles Larsen Memorial Power Plant (Unit 4) Lakeland Electric - C.D. McIntosh, Jr. Power Plant (Units 1, 5) Tampa Electric Company - Big Bend Station (Units 1, 2, 3)
Non-EGU BART Modeling Exempt Sources
Atlantic Sugar Association - Atlantic Sugar Mill Buckeye Florida – Perry

[19] EGUs were only evaluated for PM emissions. Florida relied on CAIR to satisfy BART for SO_2 and NO_x for its EGUs subject to CAIR, in accordance with 40 CFR 51.308(e)(4). Thus, SO_2 and NO_x were not analyzed.
[20] Ibid.

ExxonMobil Production - St Regis Treating Facility and Jay Gas Plant
IFF Chemical Holdings, Inc.
IMC Phosphates Company - South Pierce
International Paper Company - Pensacola Mill
Mosaic - Bartow
Mosaic - Green Bay Plant
Osceola Farms
Sugar Cane Growers Co-Op
U.S. Sugar Corp. - Clewiston Mill and Refinery

Model Plant Exempt Sources
Solutia Inc.
Lake Worth Util. - Tom G. Smith Plant (Units 6, 9)
Ft. Pierce Utilities Authority - H D King Power Plant (Units 7, 8)
Sterling Fibers, Inc.

Shut Down Sources
U.S. Sugar Corp. - Bryant Mill
IMC Phosphates Company - Port Sutton Terminal

Two of the 17 non-EGU facilities (CEMEX and White Springs Agricultural Chemicals-SR/SC Complex) were found to be subject to BART and were required to prepare a full BART determination analysis. Eleven non-EGU 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. This modeling involved assessing the visibility impact of emissions of NOx, SO_2, and PM_{10} as applicable to individual facilities. Two facilities (Solutia Inc. and Sterling Fibers, Inc) were exempt from BART because they met EPA's model plant criteria in the BART Guidelines (70 FR 39162-39163) and thus, were not evaluated further. Two facilities permanently shut down prior to preparing an analysis.

The 23 sources with BART-eligible EGUs relied on Florida's decision to use CAIR emissions limits for SO_2 and NOx to satisfy their obligation to comply with BART requirements in accordance with 40 CFR 51.308(e)(4). Therefore, EGU sources only modeled PM_{10} emissions. Prior to the CAIR remand, the State's reliance on CAIR to satisfy BART for NOx

and SO_2 for affected CAIR EGUs was fully approvable and in accordance with 40 CFR 51.308(e)(4). In a separate action, EPA has proposed a limited disapproval of the Florida regional haze SIP because of deficiencies in the State's regional haze SIP submittal arising from the remand of CAIR to EPA by the D.C. Circuit. *See* 76 FR 82219. Consequently, EPA is not taking action in this proposed rulemaking to address the State's reliance on CAIR to meet certain regional haze requirements.

On August 8, 2011, EPA published the Transport Rule which replaced CAIR. As under CAIR, EPA determined in the Transport Rule that Florida is contributing to ozone air quality problems in other states. However, unlike CAIR, EPA determined in CSAPR that Florida is contributing to SO_2 problems in other states. As a result, the Florida facilities with EGUs that previously relied on CAIR to satisfy their BART obligations for SO_2 would no longer be subject to CAIR nor able to rely on its successor, the Transport Rule, to meet their BART assessment requirements.

Accordingly, FDEP has initiated an effort to reassess BART for all of these facilities with BART-eligible EGUs. In its April 13, 2012, proposed SIP amendment, the State evaluated 12 of the 23 affected facilities. Table 7 summarizes the reevaluated facilities with BART-eligible EGUs.

Table 7: Reevaluated Florida BART-Eligible Sources

Facilities With Units Subject to BART Analysis
Existing Controls Meet the Most Stringent Level of Control
Tampa Electric Company - Big Bend Station (Units 1, 2, 3)
Facilities that Will Shut Down by December 31, 2013
Florida Power & Light - Port Everglades Power Plant (Units 3, 4)
Facilities With Unit(s) Found Not Subject to BART Analysis
Facilities that Have Shut Down
City of Tallahassee - Arvah B.Hopkins Generating Station (Unit 4) Florida Power & Light - Riviera Power Plant (Unit 4) Florida Power Corp. - Bartow Plant (Unit 3) Lakeland Electric - Charles Larsen Memorial Power Plant (Unit 4) Florida Power & Light - Cape Canaveral Power Plant (Units 1, 2) Ft Pierce Utilities Authority - H D King Power Plant (Units 7, 8)
BART Modeling Exempt Sources (SO_2, NO_X, PM_{10})
City of Gainesville Deerhaven (Unit 3) City of Vero Beach - City of Vero Beach Municipal Utilities (Units 2, 3, 4) Florida Power & Light - Putnam Power Plant (Units 3, 4, 5, 6, 7, 8, 9, 10) Lake Worth Utilities - Tom G. Smith (Units 6, 9)

Of the 23 EGU BART-eligible facilities, FDEP identified 11 units at eight facilities that have shut down or will be shut down by December 31, 2013,[21] 14 units at four facilities that model a contribution of less than 0.5 deciview when considering all three pollutants contributing to visibility impairment (SO_2, NOx, PM_{10}), and three units at one facility which has recently installed SO_2 and NOx controls that the State has determined to be the most stringent level of control available for these sources. The remaining 11 facilities with BART-eligible EGUs subject to CAIR (a total of 20 EGUs) that now have an incomplete BART analysis will be addressed by Florida in a future SIP revision, and by EPA in subsequent actions. Table 8 lists

[21] Florida had previously identified that the City of Tallahassee - Purdom Generating Station (Unit 7) would be shut down by December 31, 2013, in the State's March 19, 2010, SIP revision.

the revised list of BART-eligible sources, those with a completed BART analysis, and sources with an incomplete BART analysis at this time.

Table 8: Revised List of BART-Eligible and Subject-to-BART Sources

Facilities With Unit(s) with a Complete BART Analysis
EGUs with Existing Controls that Meet the Most Stringent Level of Control
Tampa Electric Company - Big Bend Station (Units 1, 2, 3)
EGUs to be Shut Down by December 31, 2013
City of Tallahassee - Purdom Generating Station (Unit 7)
Florida Power & Light - Port Everglades Power Plant (Units 3, 4)
Non- EGU BART Analyses
CEMEX
White Springs Agricultural Chemical - SR/SC Complex
Facilities With Unit(s) with an Incomplete BART Analysis
EGUs Subject to CAIR with PM only BART Analysis[22]
City of Tallahassee - Arvah B.Hopkins Generating Station (Unit 1)
Florida Power Corp. - Anclote Power Plant (Units 1, 2)
Florida Power Corp. - Crystal River Power Plant (Units 1, 2)
Florida Power & Light - Manatee Power Plant (Units 1, 2)
Florida Power & Light - Martin Power Plant (Units 1, 2)
Florida Power & Light - Turkey Point Power Plant (Units 1, 2)
Gulf Power Company - Crist Electric Generating Plant (Units 6, 7)
Gulf Power Company - Lansing Smith Plant (Units 1, 2)
JEA Northside - SJRPP (Unit 3)
Lakeland Electric - C.D. McIntosh, Jr. Power Plant (Units 1, 5)
Reliant Energy Indian River - Indian River Plant (Units 2, 3)
Facilities With Unit(s) Found Not Subject to BART Analysis
EGU CAIR and BART Modeling Exempt Sources (SO_2, NO_X, PM_{10})
City of Gainesville - Deerhaven Generating Station (Unit 3)
City of Vero Beach - City of Vero Beach Municipal Utilities (Units 2, 3, 4)
Florida Power & Light - Putnam Power Plant (Units 3, 4, 5, 6, 7, 8, 9, 10)
Lake Worth Utilities - Tom G. Smith (Units 6, 9)
EGU- Shut Down Sources
City of Tallahassee - Arvah B.Hopkins Generating Station (Unit 4)
Florida Power & Light - Riviera Power Plant (Unit 4)
Florida Power Corp. - Bartow Plant (Unit 3)

[22] EGUs were only evaluated for PM emissions. The Florida relied on CAIR to satisfy BART for SO_2 and NO_x for its EGUs subject to CAIR, in accordance with 40 CFR 51.308(e)(4). Thus, SO_2 and NO_x were not analyzed.

Lakeland Electric - Charles Larsen Memorial Power Plant (Unit 4)
Ft Pierce Utilities Authority - H D King Power Plant (Units 7, 8)
Florida Power & Light - Cape Canaveral Power Plant (Units 1, 2)

Non-EGU BART Modeling Exempt Sources
Atlantic Sugar Association - Atlantic Sugar Mill
Buckeye Florida - Perry
ExxonMobil Production - St Regis Treating Facility and Jay Gas Plant
IFF Chemical Holdings, Inc.
IMC Phosphates Company - South Pierce
International Paper Company - Pensacola Mill
Mosaic - Bartow
Mosaic - Green Bay Plant
Osceola Farms
Sugar Cane Growers Co-Op
U.S. Sugar Corp. - Clewiston Mill and Refinery

Non-EGU Model Plant Exempt Sources
Solutia Inc.
Sterling Fibers, Inc.

Non-EGU Shut Down Sources
U.S. Sugar Corp. - Bryant Mill
IMC Phosphates Company - Port Sutton Terminal

For the 17 non-EGU BART-eligible facilities in Table 8, the two sources found subject to BART and requiring a full BART determination analysis are CEMEX and White Springs Agricultural Chemical - SR/SC Complex. These BART-subject sources were required to complete BART determination modeling, which included an analysis of the five CAA BART factors, to determine appropriate BART controls.

c. BART Determinations

Five BART-eligible sources (i.e., CEMEX, White Springs Agricultural Chemical - SR/SC Complex, City of Tallahassee - Purdom Generating Station, Tampa Electric Company - Big Bend Station (Units 1, 2, 3), and Florida Power and Light (FPL) - Port Everglades (Units 3,

4)) modeled visibility impacts of more than the 0.5 deciview threshold for BART exemption. These five facilities are therefore considered to be subject to BART. Consequently, they each submitted permit applications to the State that included their proposed BART determinations.

In accordance with the BART Guidelines, to determine the level of control that represents BART for each source, the State first reviewed existing controls on these BART-subject sources 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.

i. CEMEX

CEMEX operates an existing Portland cement plant with two Portland cement lines (Lines 1 and 2). These include: two Polysius GEPOL preheater kilns (Kilns 1 and 2); two clinker coolers and associated raw mills; finish mills; cement and clinker handling equipment; coal handling equipment; silos; and air pollution control devices. The nominal capacity of each kiln is 780,000 tpy of clinker. The kiln was subjected to Prevention of Significant Deterioration (PSD) review and Best Available Control Technology determination (BACT) review since 1977 one or more times, and FDEP determined the permitted values compare favorably to recent determinations made throughout the country even for new units. Overall, the controls consist of effective SO_2 scrubbing in the calciner; low raw material sulfur; fabric filter baghouses for PM; and selective non-catalytic reduction (SNCR) for NOx control. All controls including emissions limits are federally enforceable.

NO_X Kiln Controls: To control emissions of NOx, CEMEX is required to either operate the installed SNCR system or install a selective catalytic reduction (SCR) system between the

preheater and the raw mill to augment or replace the existing SNCR system with an emission limit of 1.2 lb/ton of kiln preheater feed.

SO_2 Kiln Controls: The present SO_2 control system consisting of dry alkali and lime scrubbing in the kiln system and limestone scrubbing in the raw mill is the most stringent control available, and FDEP determined that it constitutes BART.

PM/PM_{10} Kiln Controls: Each subject-to-BART emissions unit at the facility identified as subject to BART is required to control PM/PM_{10} by a baghouse system. Bags/filters in each baghouse control system shall be selected based on a PM design outlet specification of 0.01 grain (gr) per dry standard cubic foot (dscf) and a PM_{10} design outlet specification of 0.007 gr/dscf.

FDEP determined it was not necessary to submit a full five-factor analysis and determined that the controls in place constituted BART.

ii. White Springs Agricultural Chemicals, Inc

White Springs Agricultural Chemicals, Inc., also known as PCS Phosphate, operates a phosphate complex that processes phosphate rock to produce several products at the Suwannee River/Swift Creek Complex (two plants). The facility consists of one rock grinder, two phosphoric acid plants, two defluorinated phosphate (DFP) plants, one dical process, two diammonium phosphate (DAP) plants, one monoammonium (MAP)/DAP storage building, one MAP/DAP screen/shipping building, four sulfuric acid plants (SAP), two phosphoric acid filters, four superphosphoric acid plants, one green superphosphoric acid plant, the Swift Creek Mine rock dryer, and one acid clarification plant. The facility also has storage silos associated with the Swift Creek Mine and the DFP plant.

Sulfuric acid is produced on-site by burning elemental sulfur, converting the resulting SO_2 to sulfur trioxide, and absorbing it into a recirculating sulfuric acid solution. Phosphoric

acid is made by acidulation of phosphate rock with sulfuric acid. Waste gypsum is produced and stacked. The phosphoric acid is reacted with ammonia to make MAP and DAP and phosphoric acid is reacted with limestone and other raw materials to make animal feed ingredients.

SAP C and D plants use the double absorption process to control SO_2 emissions and demisters to control sulfuric acid mist emissions.

All of the DAP/MAP plants include medium to high efficiency wet scrubbers that use phosphoric acid and then pond water to reduce PM from the reactor and granulators. They are also equipped with abatement scrubbers using fresh water for final cleanup. Emissions from the dryers, coolers, mills and screens are controlled by cyclones, wet scrubbers with phosphoric acid or pond water as the scrubbing medium, and by abatement scrubbers using fresh water.

A and B DFP Coolers and Swift Creek Mine Silos use wet cyclonic scrubbers with pond water as the scrubbing medium to control particulate matter emissions.

A and B DFP Plants include cross-flow packed wet scrubber with pond water as the scrubbing medium to control PM emissions.

The X Train Dical Process rotary dryer includes a series of wet venturi and cyclonic scrubbers to control PM emissions.

The #2 Phosphate Rock Grinder, X Train limestone handling, the DFP Feed Prep area, and the DFP Product Silos include fabric filter baghouses designed to recover process or product raw materials and to control PM emissions.

The Swift Creek Mine Rock Dryer and Swift Creek Mine Silos include wet cyclonic scrubber to control PM emissions. The Rock Dryer is fired primarily with natural gas.

FDEP reviewed the facility following the BART Guidelines. For most BART-subject units at the facility, the State performed a full BART determination analysis. However, for some

BART-subject units, the State found that the existing controls were the best available and no further review was performed in accordance with the BART Guidelines. *See* 70 FR 39165. In other instances, BART-subject units were modified after August 7, 1977, subject to PSD review, and BACT controls were installed. The State took this into account during the review process, and in these instances, found that the level of controls already in place for BACT are consistent with and determined to be BART.

White Springs submitted its BART permit application with proposed BART determination on the basis of the original design, and compared it to subsequent recent PSD/BACT reviews of similar emissions units at other facilities. FDEP finds that the levels of controls already in place are consistent with those found to be BACT in recent determinations and represent BART for this facility. Emissions limits consistent with this finding were incorporated into the final BART permit with some minor technical adjustments.

iii. City of Tallahassee – Purdom Generating Station

The City of Tallahassee operates the Sam O. Purdom Generating Station. Unit 7 at this facility is a BART-eligible EGU that is fired primarily with fuel oil and natural gas. The unit began operation in 1966 and is a 621 MMBtu per hour steam generator paired with a nominal 44 MW steam-electrical generator. FDEP issued a final air construction Permit No. 120001-008-AC on September 11, 2007, requiring that Unit 7 permanently cease operation no later than December 31, 2013, to satisfy BART.

iv. Tampa Electric Company - Big Bend Station (Units 1, 2, 3)

Tampa Electric Company's Big Bend Station Units 1, 2, and 3 are BART-eligible coal-fired units with a combined capacity of approximately 1,200 MW. This facility entered into a consent decree with FDEP and EPA to reduce emissions at Big Bend Station. These legally enforceable agreements required the upgrade of the ESP, upgrades to the flue gas desulfurization (FGD) scrubbers for SO_2, and the installation of SCR for NOx control. The PM emission limit is 0.03lb/MMBtu, the FGD is required to achieve 95 percent reduction efficiency, and the SCR lowers NOx emissions to 0.12 lb/MMBtu. FDEP has concluded that these are the most stringent controls technically available for this source and, thus, no further analysis for BART is necessary in accordance with the BART Guidelines. *See* 70 FR 39165.

v. Florida Power and Light (FPL) – Port Everglades (Units 3, 4)

On January 24, 2012, Florida Power and Light submitted an application to construct one nominal 1,250 MW combined cycle unit and ancillary equipment at the FPL Port Everglades Plant. The four existing fossil fuel-fired steam generators with a total nominal capacity of 1,200 MW will be shut down and dismantled as part of this project. The BART-eligible units 3 and 4 are scheduled to be demolished in the first quarter of 2013 but not later than December 31, 2013. FDEP included a copy of the permit for informational purposes in Exhibit 2.

vi. EPA Assessment

EPA proposes to agree with Florida's analyses and conclusions for the five BART-subject sources described above. EPA has reviewed the State's analyses and believes that they were conducted in a manner that is consistent with EPA's BART Guidelines and EPA's *Air Pollution Control Cost Manual* (http://www.epa.gov/ttncatc1/products.html#cccinfo).

vii. Enforceability of Limits

The BART determinations for each of the five facilities discussed above and the resulting emissions limits and conditions were adopted by Florida and have been incorporated into the facilities' title V operating permits. Copies of these permits were included for informational purposes in an attachment to the Florida Regional Haze SIP submittal of March 19, 2010, and in the April 13, 2012, amendment as Exhibit 2.

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 that 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 Florida's 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 Florida. Any controls resulting from those determinations will provide additional emissions reductions and resulting visibility improvement, giving further assurance that Florida 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 two of the three Florida 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 9 below, visibility improvements on the 20 percent worst days in Florida's Class I areas are expected to be slightly better than the uniform rate of progress by 2018 for Everglades and Chassahowitzka and slightly less than the uniform rate of progress for St. Marks based on emissions reductions from existing and planned emissions controls. Based on the projected rate of progress, St. Marks would achieve natural conditions by 2067. Also, the RPGs for the 20 percent best days provide greater visibility improvement by 2018 than current best day conditions at all three sites. 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. *See* 40 CFR 51.308(d)(1)(vi). Therefore, the CAIR states with Class I areas, including Florida, took into account emissions reductions anticipated from CAIR in determining their 2018 RPGs.[23]

Table 9: Florida 2018 RPGs (in deciviews)

Class I Area	Baseline Visibility - 20% Worst Days	2018 RPG - 20% Worst Days (Improvement from Baseline)	Uniform Rate of Progress at 2018 - 20% Worst Days (Improvement from Baseline)	Baseline Visibility - 20% Best Days	2018 RPG - 20% Best Days (Improvement from Baseline)
Chassahowitzka Wilderness Area	**25.75**	**22.27 (3.48)**	**22.31 (3.44)**	**15.51**	**13.91 (1.60)**
Everglades National Park	**22.30**	**19.90 (2.40)**	**19.92 (2.38)**	**11.69**	**11.46 (0.25)**
St. Marks Wilderness Area	**26.31**	**23.01 (3.30)**	**22.89 (3.42)**	**14.37**	**12.80 (1.57)**

[23] 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.

The RPGs for the Class I areas in Florida 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 revise its RPGs every time an event affecting these future projections changed.

EPA recognized the problems of a rigid requirement to meet a long-term goal based on modeled projections of future visibility conditions, and addressed the uncertainties associated with RPGs in several ways. EPA made clear in the RHR that the RPG is not a mandatory standard which must be achieved by a particular date. *See* 64 FR at 35733. At the same time, EPA established a requirement for a midcourse review and, if necessary, correction of the states' regional haze plans. *See* 40 CFR 52.308(g). In particular, the RHR calls for a five-year progress review after submittal of the initial regional haze plan. The purpose of this progress review is to assess the effectiveness of 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. Florida specifically committed to follow this process in the LTS portion of its submittal. Any resulting visibility

improvement differences resulting from changes in coverage for Florida's EGUs from CAIR will be assessed in the five-year progress report SIP.

D. Coordination of RAVI and Regional Haze Requirements

EPA's visibility regulations direct states to coordinate their RAVI LTS and monitoring provisions with those for regional haze, as explained in sections IV.F and IV.G of this action. Under EPA's RAVI regulations, the RAVI portion of a state SIP must address any integral vistas identified by the FLMs pursuant to 40 CFR 51.304. An *integral vista* is defined in 40 CFR 51.301 as a "view perceived from within the mandatory Class I area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area." Visibility in any mandatory Class I area includes any integral vista associated with that area. The FLMs did not identify any integral vistas in Florida. In addition, the Class I areas in Florida are neither experiencing RAVI, nor are any of the State's sources affected by the RAVI provisions. Thus, the Florida 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, Florida previously made a commitment to address RAVI should the FLM certify visibility impairment from an individual source.[24] EPA proposes to find that this regional haze submittal appropriately supplements and augments Florida's RAVI visibility provisions to address regional haze by updating the monitoring and LTS provisions as summarized below in this section.

In the Florida regional haze SIP submittal, FDEP updated its visibility monitoring program and developed a LTS to address regional haze. Also in this submittal, FDEP affirmed

[24] The Florida visibility SIP revisions were submitted to EPA on August 27, 1987, and approved by EPA on June 30, 1988 (53 FR 24695).

its commitment to complete items required in the future under EPA's RHR. Specifically, FDEP 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, FDEP made a commitment to submit a report to EPA on progress towards the RPGs for each mandatory Class I area located within Florida and in each mandatory Class I area located outside Florida which may be affected by emissions from within Florida. 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, Florida 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 Florida new source review (NSR) rules continue to provide a framework for review and coordination with the FLMs on new sources which may have an adverse impact on visibility in either form (i.e., RAVI and/or regional haze) in any Class I area. The Florida regional haze SIP contains a plan addressing the associated monitoring and reporting requirements. *See* 53 FR 24695 (June 30, 1988).

E. Monitoring Strategy and Other Implementation Plan Requirements

The primary monitoring network for regional haze in Florida is the IMPROVE network. As discussed in section V.B.2 of this action, there are currently three IMPROVE sites in Florida, which serve as the monitoring sites for the three Class I areas in Florida. IMPROVE monitoring data from 2000-2004 serves as the baseline for the regional haze program and is relied upon in the Florida regional haze submittal. In the submittal, Florida 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. Florida 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, FDEP and the local air agencies in the State operate a $PM_{2.5}$ network of the filter-based federal reference method monitors, federal equivalent method continuous monitors and continuous mass monitors, and filter-based speciated monitors. These $PM_{2.5}$ measurements help FDEP characterize air pollution levels in areas across the state, and therefore aid in the analysis of visibility improvement in and near the Class I areas.

F. Consultation with States and FLMs

1. Consultation with Other States

In December 2006 and 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.

FDEP has evaluated the impact of sources on Class I areas in neighboring states. FDEP sent letters to Alabama and Georgia documenting its analysis using the State's AOI methodology and its approach to address the visibility impairment at the Class I areas in those states. The neighboring states were supportive of the Florida approach. The documentation for these formal consultations is provided in Exhibit 3 of Florida's SIP.

EPA proposes to find that Florida 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, Florida 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. FDEP provided a draft plan dated August 27, 2009, to the FLMs (and EPA) for review. Exhibit 3 of the Florida regional haze SIP submittal includes the October 26, 2009, comment letter from the U.S. National Park Service and the U.S. Fish and Wildlife Service, which indicates that the FLMs appear to be generally supportive of the State's regional haze SIP, and were pleased with the technical information summarized in the regional haze SIP narrative. The bulk of the comments requested clarifications to the SIP or raised specific issues on the BART determinations that Florida addressed. FDEP responded to all the comments and made the requested clarifications as specified in its final SIP submittal. To address the requirement for continuing consultation procedures with the FLMs under 40 CFR 51.308(i)(4), FDEP made a commitment in the SIP to ongoing consultation with the FLMs on regional haze issues throughout implementation of its

plan, including annual discussions. FDEP 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

As summarized in sectionV.D of this action, consistent with 40 CFR 51.308(g), FDEP 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 Florida regional haze SIP. The report will evaluate the progress made towards the RPGs for the mandatory Class I areas located within Florida and in each mandatory Class I area located outside Florida that may be affected by emissions from within Florida. Florida also offered recommendations for several technical improvements that, as funding allows, can support the State's next LTS. These recommendations are discussed in detail in the Florida SIP submittal in Appendix K.

If another state's regional haze SIP identifies that Florida's SIP needs to be supplemented or modified, and if Florida agrees after appropriate consultation, 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 Taking?

EPA is proposing a limited approval of three revisions to the Florida SIP submitted by the State of Florida on March 19, 2010, August 31, 2010, and April 13, 2012, 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.

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

D. Unfunded Mandates Reform Act

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

E. Executive Order 13132, Federalism

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

This rule will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely approves a state rule implementing a federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the CAA. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

F. Executive Order 13175, Coordination with Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." 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. EPA specifically solicits additional comment on this proposed rule from tribal officials.

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

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

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

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

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

I. National Technology Transfer and Advancement Act (NTTAA)

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

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

List of Subjects in 40 CFR Part 52

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

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

Dated: May 14, 2012

A. Stanley Meiburg,

Acting Regional Administrator,

Region 4

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