6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2019-0447; FRL-10012-92-Region 4]

Air Plan Approval; MS; BART SIP and Regional Haze Progress Report

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, through parallel processing, a draft Mississippi State Implementation Plan (SIP) revision, submitted through a letter dated April 23, 2020, addressing best available retrofit technology (BART) determinations for 14 electric generating units (EGUs) ("draft BART SIP"). These EGUs were initially addressed in EPA's prior limited approval and limited disapproval actions on Mississippi's regional haze SIP because of deficiencies arising from the State's reliance on the Clean Air Interstate Rule (CAIR) to satisfy certain regional haze requirements. EPA proposes to approve the draft BART SIP and finds that it corrects the deficiencies that led to the limited approval and limited disapproval of the State's regional haze SIP; to withdraw the limited disapproval of the regional haze SIP; and to replace the prior limited approval with a full approval of the regional haze SIP as meeting all regional haze requirements of the Clean Air Act (CAA or Act) for the first implementation period. In addition, EPA is proposing to approve the State's first periodic report describing progress towards reasonable progress goals (RPGs) established for regional haze and the associated determination that the State's regional haze SIP is adequate to meet these RPGs for the first implementation period ("Progress Report"). The State submitted the progress report as a SIP revision by letter dated October 4, 2018.

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

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R04-OAR-2019-0447, at http://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Michele Notarianni or Gobeail McKinley, Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Ms. Notarianni can be reached via telephone at (404) 562-9031 or electronic mail at notarianni.michele@epa.gov. Ms. McKinley can be reached via telephone at (404) 562-9230 or electronic mail at mckinley.gobeail@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Parallel Processing

Parallel processing refers to a process that utilizes concurrent state and federal proposed rulemaking actions. Generally, the state submits a copy of the proposed regulation or other revisions to EPA before conducting its public hearing and completing its public comment process under state law. EPA reviews this proposed state action and prepares a notice of proposed rulemaking (NPRM) under federal law.[1] If, after the state completes its public comment process and after EPA's public comment process has run, the state changes its final submittal from the proposed submittal, EPA evaluates those changes and decides whether to publish another NPRM in light of those changes or to proceed to taking final action on its proposed action and describe the state's changes in its final rulemaking action. Any final rulemaking action by EPA will occur only after the final submittal has been adopted by the state and formally provided to EPA.

In its previously submitted regional haze SIP,[2] the Mississippi Department of Environmental Quality (MDEQ) relied on CAIR[3] to meet BART requirements for the 14 BART-eligible units, located at seven facilities, formerly subject to that trading program.[4] Mississippi's newly submitted draft BART SIP addresses BART for these EGUs in lieu of relying on CAIR as an alternative to BART. Because the draft BART SIP has not yet completed the State's public notice-and-comment process, Mississippi has requested that EPA parallel process the SIP

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[1] Although not the case in this proposed rulemaking, in some instances, EPA's NPRM is published in the Federal Register during the same time frame that the state is holding its public hearing and conducting its public comment process. The state and EPA then provide for concurrent public comment periods on both the state action and federal action.

[2] In this notice, EPA is using "regional haze SIP" and "regional haze plan" interchangeably.

[3] CAIR created regional cap-and-trade programs to reduce sulfur dioxide (SO_2) and nitrogen oxide (NOx) emissions in 27 eastern states (and the District of Columbia), including Mississippi, that contributed to downwind nonattainment or interfered with maintenance of the 1997 8-hour ozone national ambient air quality standards (NAAQS) or the 1997 fine particulate matter ($PM_{2.5}$) NAAQS.

[4] *See* 77 FR 38191 (June 27, 2012); 77 FR 33642 (June 7, 2012).

revision with the State's rulemaking proceedings. Mississippi submitted the draft BART SIP to EPA on April 23, 2020,[5] and noticed it for public comment on the same date. The State's public comment period closed on May 23, 2020.

After Mississippi submits the final BART SIP (including a response to all public comments raised during the State's public participation process), EPA will evaluate the submittal. If the State changes the final submittal from the draft BART SIP that EPA is proposing to approve today, EPA will evaluate those changes for significance. If EPA finds any such changes to be significant, then the Agency intends to determine whether to re-propose based on the revised submission or to proceed to take final action on the BART SIP as changed by the State.

II. Background

A. Regional Haze and the Regional Haze Plan

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit $PM_{2.5}$ (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 $PM_{2.5}$ which impairs visibility by scattering and absorbing light. Visibility impairment (i.e., light scattering) reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects (including premature death, heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms) and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

[5] EPA received MDEQ's April 23, 2020, draft BART SIP on April 24, 2020.

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[6] in many Class I areas[7] in the western United States is 100-150 kilometers (km), or about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In most of the eastern Class I areas of the United States, the average visual range is less than 30 km, or about one-fifth of the visual range that would exist under estimated natural conditions. *See* 64 FR 35714, 35715 (July 1, 1999). CAA programs have reduced emissions of haze-causing pollution, lessening visibility impairment and resulting in improved average visual ranges.[8]

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, anthropogenic impairment of visibility in 156 national parks and wilderness areas designated as mandatory Class I federal areas. Congress added section 169B to the CAA in 1990 to address regional haze issues, and EPA subsequently promulgated the Regional Haze Rule (RHR).[9] The

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

[7] 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); 40 CFR Part 81 Subpart D. 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 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."

[8] An interactive "story map" depicting efforts and recent progress by EPA and states to improve visibility at national parks and wilderness areas is available at: http://arcg.is/29tAbS3.

[9] *See* 64 FR 35713 (July 1, 1990).

RHR established a requirement to submit a regional haze SIP which applies to all 50 states, the District of Columbia, and the Virgin Islands.[10] Each jurisdiction was required to submit a SIP addressing regional haze requirements for the first implementation period no later than December 17, 2007.[11]

On September 22, 2008, Mississippi submitted a SIP revision to address regional haze in Class I areas impacted by emissions from Mississippi and subsequently amended that submittal on May 9, 2011. As discussed further in Section II.B.2, EPA finalized a limited approval and a limited disapproval of the Mississippi regional haze SIP in June 2012 because of deficiencies[12] in the regional haze SIP arising from the State's reliance on CAIR to meet certain regional haze requirements, including BART.

B. BART

1. Statutory and Regulatory Requirements

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) 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 built between 1962 and 1977 procure, install, and operate "Best Available Retrofit Technology" as determined by the state. On July 6, 2005, EPA published the *Guidelines for*

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[10] 40 CFR 51.300(b).
[11] 40 CFR 51.308(b).
[12] The deficiencies resulting from Mississippi's reliance on CAIR to satisfy BART relate to those BART determinations and to the use of those determinations as an element of the required long-term strategy for achieving RPGs. Mississippi's reliance on CAIR did not affect its reasonable progress control analysis because the State determined in its regional haze SIP that no controls were necessary for reasonable progress given the areas of influence and consultation with neighboring states. *See* 77 FR 11879, 11888 (February 28, 2012) for further information on the reasonable progress evaluation.

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 the BART evaluation process. Under the RHR and the BART Guidelines, the BART evaluation process consists of three steps: (1) an identification of all BART-eligible sources, (2) an assessment of whether the BART-eligible sources are subject to BART, and (3) a determination of the BART controls.[13] States must conduct BART determinations for all "BART-eligible" sources that may reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area, or in the alternative, adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART. In making a BART determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts, a state must use the approach set forth in the BART Guidelines. A state is generally encouraged, but not required, to follow the BART Guidelines in other aspects.

In the first step of the BART evaluation process, states are required to identify all the BART-eligible sources within their boundaries by utilizing the three eligibility criteria in the Act and the RHR: (1) one or more emission units at the facility fit within one of the 26 categories listed in the BART Guidelines; (2) the emission unit(s) began operation on or after August 6, 1962, and was in existence on August 6, 1977; and (3) the potential emissions of any visibility-impairing pollutant from the units exceed 250 tons per year (tpy).[14] With respect to the third criterion, states must address all visibility-impairing pollutants emitted by a BART-eligible source, which is the collection of emissions units whose potential to emit for a visibility-

[13] See 40 CFR 51.308(e); BART Guidelines, I.F.
[14] *See* CAA section 169A(b)(2)(A), (g)(7); 40 CFR 51.301 (definition of "Existing stationary facility"); *see also* BART Guidelines, II.

impairing pollutant is greater than 250 tpy. The most significant visibility-impairing pollutants are SO_2, NOx, and particulate matter (PM).[15] States should use their best judgment in determining whether VOC or NH_3 compounds impair visibility in Class I areas.[16] Sources that meet all three criteria are BART-eligible.

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. Section III of the BART Guidelines allows states to exempt BART-eligible sources from further BART review (i.e., deem them not subject to BART) via modeling and emissions analyses demonstrating that the sources may not reasonably be anticipated to cause or contribute to any visibility impairment in any Class I area. For such sources, a state need not make a BART determination.

For states using modeling to determine whether single sources are subject to BART, 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.[17] 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

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[15] *See* 70 FR 39160.
[16] *See* BART Guidelines, II.A.3, III.A.2.
[17] *See* BART Guidelines, III.A.3 ("Option 1: Individual Source Attribution Approach (Dispersion Modeling)").

and the magnitude of the individual sources' impacts. Generally, the exemption threshold set by the state should not be higher than 0.5 deciview (dv).[18] States are also free to use a lower threshold if, for instance, they conclude that the location of a large number of BART-eligible sources in proximity of a Class I area justifies this approach.

Once a state has determined which sources are subject to BART, the state must determine BART for these sources in the third and final step of the BART evaluation process. 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, but must reasonably consider all five factors.

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 169A(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

[18] A dv is the unit of measurement on the dv index scale for quantifying in a standard manner human perceptions of visibility. *See* 40 CFR 51.301. 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." *See* BART Guidelines, III.A.1.

monitoring, recordkeeping, and reporting for the BART controls on the source. *See* CAA section 110(a)(2).

2. Draft BART SIP

a. Relationship to EPA's Transport Rules

Like many other states formerly subject to CAIR, Mississippi had relied on CAIR in its regional haze SIP to meet certain requirements of EPA's RHR, including BART requirements for emissions of SO_2 and NOx from its BART-eligible EGUs in the State.[19] This reliance was consistent with EPA's regulations at the time that Mississippi developed its regional haze SIP. *See* 70 FR 39104 (July 6, 2005). However, in 2008, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) invalidated CAIR, although it ultimately remanded the rule to EPA without vacatur to preserve the environmental benefits CAIR provided. *See North Carolina* v. *EPA,* 550 F.3d 1176, 1178 (D.C. Cir. 2008).

On August 8, 2011 (76 FR 48208), acting on the D.C. Circuit's remand, EPA promulgated the Cross-State Air Pollution Rule (CSAPR) to replace CAIR and issued Federal Implementation Plans (FIPs) to implement the rule in CSAPR-subject states.[20] Although Mississippi was covered under CAIR's annual NOx and SO_2 trading programs, only CSAPR's ozone-season NOx program applied to the State. *See* 40 CFR 52.1284.[21] Implementation of CSAPR was scheduled to begin on January 1, 2012, when CSAPR would have superseded the CAIR program. However, numerous parties filed petitions for review of CSAPR, and at the end

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[19] In addition to relying on CAIR to satisfy BART SO_2 and NOx requirements, these sources also modeled their coarse PM (PM_{10}) emissions and found that those emissions do not contribute to visibility impairment in any Class I area. *See* 77 FR 11890.

[20] CSAPR requires substantial reductions of SO_2 and NOx emissions from EGUs in 27 states in the Eastern United States that significantly contribute to downwind nonattainment of the 1997 $PM_{2.5}$ and ozone NAAQS, 2006 $PM_{2.5}$ NAAQS, and the 2008 8-hour ozone NAAQS.

[21] *See also* 76 FR 48208 (Mississippi FIP for 1997 ozone NAAQS); 81 FR 74504 (October 26, 2016) (Mississippi FIP for 2008 ozone 8-hour ozone NAAQS).

of 2011, the D.C. Circuit issued an order staying CSAPR pending resolution of the petitions and directing EPA to continue to administer CAIR. Order of December 30, 2011, in *EME Homer City Generation, L.P. v. EPA,* D.C. Cir. No. 11-1302. EPA ultimately began implementation of CSAPR on January 1, 2015.[22]

During this same timeframe, EPA also finalized a limited approval and a limited disapproval of the Mississippi regional haze SIP in June 2012 because of deficiencies in the regional haze SIP arising from the State's reliance on CAIR as an alternative to BART for the State's BART-eligible EGUs.[23] *See* 77 FR 38191 (June 27, 2012) (limited approval); 77 FR 33642 (June 7, 2012) (limited disapproval). In the limited disapproval action, EPA did not subject Mississippi to a FIP. Mississippi had requested that EPA not issue a FIP and instead provide the State with additional time to correct the deficiencies in its regional haze SIP through a SIP revision.[24]

Accordingly, Mississippi began working on a new SIP submission to address the limited disapproval of the State's regional haze SIP and the change from CAIR and CSAPR. One important impact of the transition from CAIR to CSAPR was that Mississippi previously relied on CAIR as an alternative to BART for both SO_2 and NOx because it participated in trading programs for both pollutants under CAIR; however, because Mississippi is only part of the CSAPR seasonal NO_x program (and not part of the SO_2 program), it could not rely on CSAPR to satisfy BART for SO_2. Thus, the State worked with the BART-eligible EGUs formerly subject

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[22] *See* 79 FR 71663.
[23] The State's analysis of reasonable progress controls was not dependent on CAIR, and thus not affected by CAIR's invalidation. *See* 77 FR 11879, 11888 (February 28, 2012) (finding no controls were necessary for reasonable progress given the areas of influence and consultation with neighboring states).
[24] *See* 77 FR 33654.

to CAIR to determine how these facilities would now address BART.[25] These 14 BART-eligible units are located at the following seven facilities:

- Cooperative Energy[26] - Plant Moselle (Plant Moselle);
- Cooperative Energy - R. D. Morrow Sr. Generating Plant (Plant Morrow);
- Entergy Mississippi, Inc. - Baxter Wilson Plant (Baxter Wilson);
- Entergy Mississippi, Inc. - Gerald Andrus Plant (Gerald Andrus);
- Mississippi Power Company - Plant Chevron (Plant Chevron);
- Mississippi Power Company - Plant Daniel (Plant Daniel); and
- Mississippi Power Company - Plant Watson (Plant Watson).

As explained further in Section III of this notice, the draft BART SIP proposes to find that these 14 BART-eligible EGUs are exempt from BART because visibility modeling and/or supplemental analyses demonstrate that they are not reasonably anticipated to cause or contribute to visibility impairment in any Class I area.

b. Pollutants Addressed

As described earlier, the BART Guidelines direct states to address SO_2, NOx, and direct PM (including both PM_{10} and $PM_{2.5}$) emissions as visibility-impairing pollutants, and to exercise judgment in determining whether VOC or NH_3 emissions from a source impair visibility in an area. *See* 70 FR 39160. Mississippi had previously determined that VOC from anthropogenic sources and NH_3 from point sources are not significant visibility-impairing pollutants in Mississippi for the first implementation period. The State continues to rely on these findings in

[25] EPA previously approved the State's identification of BART-eligible sources in its limited approval action. EPA is not reexamining these BART-eligibility findings in this rulemaking, and any comments on this issue are beyond the scope of this notice.

[26] Cooperative Energy was formerly known as South Mississippi Electric Power Association.

its draft BART SIP. EPA previously approved these findings in our earlier limited approval, and the Agency is not reexamining this issue in this rulemaking.[27]

c. Dispersion Modeling Methodology

Consistent with the BART Guidelines, Mississippi requested that each of its seven BART-eligible facilities formerly subject to CAIR develop and submit dispersion modeling to assess the extent of their contribution to visibility impairment at surrounding Class I areas. The BART Guidelines allow states to use the CALPUFF[28] 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 may reasonably be anticipated to cause or contribute to impairment of visibility in Class I areas (i.e., whether it is subject to BART). The BART Guidelines also recommend that states develop a modeling protocol for making individual source attributions.

The VISTAS states, including Mississippi, developed a "Protocol for the Application of CALPUFF for BART Analyses" (VISTAS BART Modeling Protocol).[29] Mississippi, in coordination with VISTAS, used this modeling protocol to apply CALPUFF to determine whether individual sources in Mississippi were subject to or exempt from BART. EPA previously approved the use of this modeling methodology by Mississippi,[30] and the Agency

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[27] *See* 77 FR 11887-88 (discussing analysis by the State and the Visibility Improvement State and Tribal Association of the Southeast (VISTAS)).

[28] 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 at: http://www.src.com/calpuff/download/download.htm.

[29] The VISTAS BART Modeling Protocol, December 22, 2005, Revision 3.2 (August 31, 2006), is included in Appendix L.8 of the BART SIP.

[30] *See* 77 FR 11888-89.

believes that the continued use of this modeling methodology in the draft BART SIP remains appropriate.

d. Contribution Threshold

In its prior regional haze submissions, MDEQ used a contribution threshold of 0.5 dv for determining which BART-eligible units (including the 14 units addressed by the draft BART SIP) are subject to BART. EPA previously approved the use of this 0.5 dv BART contribution threshold, and the Agency is not reexamining this issue in this rulemaking.[31]

C. Progress Report Requirements

The RHR requires each state to submit progress reports that evaluate progress towards the RPGs for each mandatory Class I area within the state and for each Class I area outside the state which may be affected by emissions from within the state. *See* 40 CFR 51.308(g). In addition, the provisions of 40 CFR 51.308(h) require a state to submit, at the same time as each progress report, a determination of the adequacy of the state's existing regional haze plan. The first progress report is due five years after submittal of the initial regional haze plan and must be submitted as a SIP revision. Mississippi submitted its progress report for the first implementation period to EPA on October 4, 2018.

III. Summary and EPA's Evaluation of Mississippi's BART SIP

A. Summary of Mississippi's BART SIP

[31] The factors supporting the Agency's original approval of the 0.5 dv BART contribution threshold have not changed. *See* 77 FR 11889 (Feb. 28, 2012). In fact, there are now fewer BART-eligible sources (due to the removal of all BART-eligible units at Plant Morrow and Unit 2 at Baxter Wilson) and less visibility-impairing pollutants emitted from BART-eligible sources than existed in the record at the time of EPA's earlier limited approval (due to SO_2 scrubbers installed at Plant Daniel and removal of fuel oil burning capabilities for Unit 1 at Gerald Andrus and Unit 1 at Baxter Wilson). These changes are discussed further in Section III of this notice.

The draft BART SIP sets forth MDEQ's subject-to-BART determinations for the BART-eligible sources formerly subject to CAIR, and finds that none of these sources is subject to BART. Table 1 identifies these BART-eligible sources, the highest modeled impact at the Class I area nearest each source,[32] and the State's determination regarding whether the sources are subject to BART.

Table 1: Mississippi EGUs Subject-to-BART Modeling

Facility Name	BART-Eligible Units	Nearest Class I Area	Maximum 24-hour 98th Percentile Visibility Impact[33] (dv)	Subject to BART?
Baxter Wilson	1, 2	Breton Wilderness Area (Breton) (LA)	0.49*	No
Gerald Andrus	1	Caney Creek Wilderness Area (Caney Creek) (AR)	0.15*	No
Plant Chevron	1, 2, 3, 4	Breton (LA)	0.27	No
Plant Daniel	1, 2	Breton (LA)	0.39	No
Plant Morrow	1, 2	Breton (LA)	N/A**	N/A**
Plant Moselle	3	Breton (LA)	0.05	No
Plant Watson	4, 5	Breton (LA)	0.44	No

*These visibility impacts for Baxter Wilson and Gerald Andrus are based on burning natural gas only as these facilities have removed the ability to burn fuel oil at Unit 1 for each facility. In addition, as explained further below, the visibility impact for Baxter Wilson was modeled based on emissions from both Unit 1 and Unit 2, but Unit 2 at Baxter Wilson has since been removed.

[32] MDEQ followed the VISTAS BART Modeling protocol which specifies that BART exemption modeling should be performed for Class I areas located within 300 km of each BART-eligible source. The Class I areas listed in Table 1 are the only Class I areas located within 300 km of each BART-eligible source with the exception of Baxter Wilson, which has no Class I areas within 300 km and is located 310 km from Breton.

[33] EPA's BART Guidelines recommend comparing visibility improvements between control options using the 98th percentile of 24-hour delta dv, which is equivalent to the facility's 8th highest visibility impact day. *See* 70 FR 39162 (July 6, 2005). The 98th percentile is recommended rather than the maximum value to allow for uncertainty in the modeled impacts and to avoid undue influence from unusual meteorological conditions. The "delta" refers to the difference between total dv impact from the facility plus natural background, and dv of natural background alone, so "delta deciviews" is the estimate of the facility's impact relative to natural visibility conditions. The VISTAS BART Modeling Protocol interprets EPA's recommended use of the 98th percentile value as the highest of the three annual 98th percentile values at a particular Class I area or the 22nd highest value in the combined 3-year period, whichever is more conservative (p.14).

**"N/A" indicates that there is no visibility impact from Plant Morrow Units 1 and 2 because these BART-eligible units were removed from service.

The original modeling for each of these plants was generally performed in the early 2010s, using data from an earlier period (e.g., 2001-03 or 2003-05) and earlier versions of the CALPUFF model. For four facilities (Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle), the State supplemented the original modeling with new analyses of emissions changes for SO_2, NOx, and PM_{10}[34] since the BART baseline period. For each plant, recent emissions have either remained roughly equivalent to or decreased relative to the baseline period modeled. Accordingly, the State concluded that the prior modeling results remain valid for determining whether the sources are subject to BART.[35]

For Plant Daniel and Plant Watson, the sources conducted updated modeling with recent emissions data and the current version of CALPUFF. Finally, Plant Morrow's BART-eligible units are permanently retired, and thus there is no need to determine whether this source is subject to BART.

The following subsections discuss in more detail MDEQ's assessment of the BART exemption modeling for each of the seven facilities.

1. *Mississippi Power Company – Chevron Cogenerating Plant Units 1, 2, 3, and 4*

Units 1, 2, 3, and 4 at Plant Chevron, located in Pascagoula, Mississippi, and owned and operated by Mississippi Power Company, have been identified by MDEQ as BART-eligible. Plant Chevron is located approximately 48 km north of Breton. Plant Chevron is an electric generating facility with four gas-fired combined cycle turbines. All four units each have the

[34] PM_{10} includes $PM_{2.5}$, thus, MDEQ evaluated PM_{10} emissions data in the supplemental emissions analyses in the draft BART SIP.

[35] In addition, as further explained in Section III.B.2, EPA has also evaluated the potential impacts of updates to the CALPUFF model, and found that such updates are unlikely to result in significantly different visibility impacts.

potential to emit more than 250 tpy of NOx emissions. Plant Chevron performed CALPUFF modeling in 2011 on these four units utilizing CALPUFF version 5.754 Level 060202. The modeling analysis predicted a maximum annual 98th percentile 24-hour average visibility impact of 0.27 dv over the three years modeled on Breton, and a 22nd highest day's visibility impact over all three years of 0.24 dv.

As explained previously, because the original modeling was conducted years ago, MDEQ also performed a supplemental emissions analysis for this facility. MDEQ compared more current (2016-2018) SO_2, NOx, and PM_{10} emissions values from annual emissions reports submitted by Plant Chevron with the 2003-2005 baseline emissions values and showed that recent emissions have remained roughly equivalent to or decreased relative to the baseline period modeled. Therefore, MDEQ concluded that it is not necessary to remodel using recent emissions. Table 2 compares the maximum 24-hour emissions rates for 2003-2005 that were modeled in 2011 against updated maximum 24-hour emissions rates for 2016-2018. The State found that: 1) the maximum SO_2 emissions rates from all four units combined were slightly higher, but still quite low, in the updated period compared to the baseline period (approximately 8 pounds per hour (lb/hr) vs 4 lb/hr); 2) the maximum NOx emissions rates from all four units combined were significantly lower in the updated period compared to the baseline period (approximately 420 lb/hr vs 558 lb/hr); and 3) the maximum PM_{10} emissions rates from all four units combined were approximately the same (9 lb/hr). The 2011 CALPUFF modeling found that most of the visibility impact from this facility was from nitrates, so the recent decrease in NOx emissions would suggest a corresponding decrease in visibility impact on Breton.

In addition, Table 3 compares the annual 2003-2005 baseline emissions of SO_2, NOx, and PM_{10} to 2016-2018 annual emissions. Annual emissions are not an input into CALPUFF

modeling, but MDEQ elected to consider them. The annual emissions comparison provides a general indication of overall trends in emissions between the baseline period that was used in the 2011 modeling and more recent emissions. The annual emissions of NOx and SO_2 are higher in the 2016-2018 period and PM_{10} emissions are lower.

Table 2: Plant Chevron Modeled (2003-2005) and 2016-2018 Maximum 24-hour Emissions Rates

Emission Unit	Maximum 24-hour Emissions Rates (lb/hr) (2003-2005)			Maximum 24-hour Emissions Rates (lb/hr) (2016-2018)		
	SO_2	NOx	PM_{10}	SO_2	NOx	PM_{10}
Unit 1	0.75	119.58	1.90	0.17	90.91	1.88
Unit 2	0.78	122.64	1.95	0.17	88.84	1.83
Unit 3	1.00	159.23	2.55	4.11	119.64	2.47
Unit 4	0.98	156.84	2.50	3.66	120.56	2.49
Total	3.51	558.29	8.90	8.11	419.95	8.67

Table 3: Plant Chevron Baseline (2001-2003) and Current (2016-2018) Period Annual Emissions Comparison

Year	Combined Annual Emission (tons) Units 1-4		
	SO_2	NOx	PM_{10}
2001	1.61	1,238.26	66.14
2002	1.55	1,181.77	62.59
2003	1.44	1,264.50	67.65
2016	8.01	1,430.36	29.50
2017	7.77	1,274.89	26.30
2018	5.76	1,240.95	26.11

In sum, MDEQ concluded that Plant Chevron Units 1, 2, 3, and 4 are not subject to BART, and thus, no further BART analysis is required because Plant Chevron's 2011 modeling found that its visibility impact was 0.27 dv which is significantly less than 0.5 dv, and there have been no significant increases in SO_2, NOx, or PM_{10} emissions since the modeled baseline period. Specifically, there have been no significant increases in the maximum 24-hour SO_2 nor PM_{10} emissions rates, and the maximum 24-hour NOx emissions rates have declined.

2. Mississippi Power Company – Plant Victor J Daniel Units 1 and 2

Units 1 and 2 at Plant Daniel, located in Escatawpa, Mississippi, and owned and operated by Mississippi Power Company, have been identified by MDEQ as BART-eligible. Plant Daniel is approximately 63 km northeast of Breton. Plant Daniel is an electric generating facility with two coal-fired steam EGUs. Each of the units have the potential to emit over 250 tpy of SO_2, NOx, and PM_{10}. Plant Daniel controls SO_2 emissions from these units through scrubbers (i.e., wet flue gas desulfurization (FGD) systems) installed to comply with EPA's Mercury and Air Toxics Standards (MATS).[36] Scrubber operation began in September 2015. Mississippi Power Company performed updated CALPUFF modeling on Units 1 and 2 using recent emissions data (i.e., from September 2015-August 2018) and the current EPA-approved version of CALPUFF. The modeling analysis predicted a maximum annual 98th percentile 24-hour average visibility impact of 0.39 dv over the three years modeled, and a 22nd highest day's visibility impact over all three years of 0.33 dv. MDEQ concluded that Plant Daniel's Units 1 and 2 are not subject to BART, and thus, no further BART analysis is required because the 98th percentile 24-hour average visibility impact of 0.39 dv is below the State's 0.5 dv contribution threshold for BART.

3. Entergy Mississippi Inc. – Baxter Wilson Plant Units 1 and 2

Units 1 and 2 at Baxter Wilson, located in Vicksburg, Mississippi, and owned and operated by Entergy Mississippi, Inc., have been identified by MDEQ as BART-eligible. Baxter Wilson is located approximately 310 km northwest of Breton. Baxter Wilson is an electric generating facility that currently has one natural gas-fired unit (Unit 1). The initial CALPUFF modeling was performed in 2012 with CALPUFF version 5.8 Level 070623. The modeling used the maximum 24-hour emissions rates over the three-year baseline period of 2001-2003

[36] See June 15, 2020, e-mail from MDEQ to EPA Region 4 that includes an October 30, 2015 title V permit renewal application addendum for Plant Daniel addressing MATS requirements. These documents are included in the docket for this proposed action.

assuming that both Units 1 and 2 fired only natural gas. This modeling indicated a maximum 98th percentile 24-hour impact of 0.49 dv over the three years modeled and a 22nd highest day's visibility impact over all three years of 0.39 dv, both of which are below the contribution threshold of 0.5 dv.

Since the modeling was performed, the facility has undergone changes. Unit 1 at Baxter Wilson originally was a dual fuel oil and gas-fired unit, but the fuel oil tanks have been rendered unusable, and the capability to burn fuel oil is in the process of being removed.[37] Unit 2, the larger unit, permanently retired thereby reducing SO_2, NOx, and PM emissions from the plant.[38] Given these changes and the fact that the original modeling was conducted years ago, MDEQ also performed a supplemental emissions analysis for this facility. MDEQ compared more current (2016-2018) SO_2, NOx, and PM_{10} emissions values from annual emissions reports submitted by Baxter Wilson with the 2001-2003 baseline emissions values and showed that recent emissions have remained roughly equivalent to or decreased relative to the baseline period modeled. Therefore, MDEQ concluded that it is not necessary to remodel using recent emissions. Table 4 compares the maximum 24-hour emissions rates for 2001-2003 that were modeled with updated rates for 2016-2018. Because the facility can no longer burn fuel oil, all emissions values in Table 4 reflect the burning of natural gas. The State found that the combined current emissions rates from Units 1 and 2 have decreased considerably relative to the baseline values modeled for SO_2, NOx, and PM_{10} because Unit 2 has shut down. In particular, current NOx emissions rates are approximately one-fifth of the modeled emissions rates.

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[37] See May 27, 2020, e-mail from MDEQ to EPA Region 4 that includes a September 8, 2019, letter providing an update on the removal of fuel oil capabilities at Gerald Andrus and Baxter Wilson. These documents are included in the docket for this proposed action.

[38] Unit 2 at Baxter Wilson was decommissioned in June 2018. A copy of the Acid Rain and CSAPR Trading Programs Retired Unit Exemption Form is located in Appendix L.7.2 of the draft BART SIP.

In addition, Table 5 compares the annual baseline emissions of 2001-2003 to 2016-2018 annual emissions. Table 5 reflects annual emissions from burning both natural gas and fuel oil. MDEQ concludes that the current annual emissions are much less than the baseline emissions for all pollutants.

Table 4: Baxter Wilson Modeled 2001-2003 and 2016-2018 Maximum 24-hour Emissions Rates – Natural Gas Only

Emission Unit	Maximum 24-hour Emissions Rates (lb/hr) (2001-2003)			Maximum 24-hour Emissions Rates (lb/hr) (2016-2018)		
	SO_2	NOx	PM_{10}	SO_2	NOx	PM_{10}
Unit 1	2.71	2,030	35.69	3.67	1,337	36.17
Unit 2	2.40	4,674	49.77	0	0	0
Total	5.11	6,704	85.46	3.67	1,337	36.17

Table 5: Baxter Wilson Baseline (2001-2003) and Current (2016-2018) Period Annual Emissions Comparison – Natural Gas and Fuel Oil

Year	Combined Annual Emission (tons)		
	SO_2	NOx	PM_{10}
2001	34,117.18	14,274.82	2,796.09
2002	8.34	6,375.26	102.94
2003	1.99	1,325.02	24.51
2016	2.49	1,550.71	25.19
2017	2.65	794.41	25.06
2018	3.08	1,111.63	34.08

MDEQ concluded that Baxter Wilson is not subject to BART, and no further BART analysis is required because the maximum 98th percentile 24-hour average visibility impact of 0.49 dv is below the State's 0.5 dv contribution threshold for BART, and recent maximum 24-hour emissions rates and annual emissions of SO_2, NOx, and PM have declined since the 2001-2003 modeled baseline period.

4. Entergy Mississippi Inc. – Gerald Andrus Plant Unit 1

Gerald Andrus Unit 1, located in Greenville, Mississippi, and owned and operated by Entergy Mississippi, Inc., has been identified by MDEQ as BART-eligible. Gerald Andrus is located approximately 290 km east of Caney Creek. Gerald Andrus is an electric generating

facility that currently has one natural gas-fired unit (Unit 1). The initial CALPUFF modeling performed in 2012 for Unit 1 using CALPUFF Version 5.8 Level 070623 was based on Unit 1 only firing natural gas. This modeling demonstrated a maximum 98th percentile 24-hour average visibility impact over the three years modeled of 0.15 dv and a 22nd highest day's visibility impact over all three years of 0.12 dv based on burning natural gas.

As with Baxter Wilson, the facility has undergone changes since the original modeling. Namely, Unit 1 at Gerald Andrus originally was a dual fuel oil- and gas-fired unit. As of April 23, 2020, Gerald Andrus removed the capability to utilize fuel oil.[39] Given this change and the fact that the original modeling was conducted years ago, MDEQ also performed a supplemental emissions analysis for this facility. MDEQ compared more current (2016-2018) SO_2, NOx, and PM_{10} emissions values from annual emissions reports submitted by Gerald Andrus with the 2001-2003 baseline emissions values and showed that recent emissions have remained roughly equivalent to or decreased relative to the baseline period modeled. Therefore, MDEQ concluded that it is not necessary to remodel using recent emissions. The comparison of 2001-2003 modeled maximum 24-hour emissions rates to updated 2016-2018 maximum 24-hour emissions rates of SO_2, NOx, and PM_{10} is shown in Table 6. Because the facility has removed the ability to burn fuel oil, all emissions values in Table 6 reflect the burning of natural gas. The State's evaluation found that the maximum 24-hour SO_2 emissions rates from 2016-2018 were essentially the same as the modeled value (approximately 3.8 lb/hr vs. 3.7 lb/hr), and that recent maximum 24-hour PM_{10} and NOx emissions rates were less than the modeled emissions rates. In addition, Table 7 compares the annual 2001-2003 baseline emissions to 2016-2018 annual

[39] See May 27, 2020, e-mail from MDEQ to EPA Region 4 with a September 8, 2019, letter providing an update on the removal of fuel oil capabilities at Gerald Andrus and Baxter Wilson. These documents are included in the docket for this proposed action.

emissions of SO_2, NOx, and PM_{10}. Table 7 reflects annual emissions from burning both natural gas and fuel oil. MDEQ concluded that the current annual emissions are much less than the baseline emissions for all pollutants.

Table 6: Gerald Andrus Modeled 2001-2003 and 2016-2018 Maximum 24-hour Emissions Rates – Natural Gas Only

Emission Unit	Maximum 24-hour Emissions Rates (lb/hr) (2001-2003)			Maximum 24-hour Emissions Rates (lb/hr) (2016-2018)		
	SO_2	NOx	PM_{10}	SO_2	NOx	PM_{10}
Unit 1	3.66	3,971	54.2	3.83	1,813	47.13

Table 7: Gerald Andrus Baseline (2001-2003) and Current (2016-2018) Period Annual Emissions Comparison – Natural Gas and Fuel Oil

Year	Combined Annual Emission (tons)		
	SO_2	NOx	PM_{10}
2001	32,725.12	8,417.70	2,108.27
2002	8.44	4,809.19	103.72
2003	12,568.21	6,626.94	1,096.43
2016	2.22	763.67	26.36
2017	1.53	436.82	17.26
2018	3.15	1,138.78	36.39

MDEQ concluded that Gerald Andrus is not subject to BART, and no further BART analysis is required because the 98th percentile 24-hour average visibility impact of 0.15 dv is well below the State's 0.5 dv threshold contribution for BART, 2016-2018 annual emissions of SO_2, NOx, and PM have declined from 2001-2003 levels, and the maximum 24-hour emissions rates of SO_2, NOx, and PM_{10} have remained equivalent to (SO_2) or lower than (NO_x and PM_{10}) those in the 2001-2003 modeled baseline period.

5. Cooperative Energy – R. D. Morrow Sr. Generating Plant Units 1 and 2

Plant Morrow Units 1 and 2, located in Purvis, Mississippi, and owned and operated by Cooperative Energy, were previously identified by MDEQ as BART-eligible. Plant Morrow is located approximately 138 km from Breton. On November 17, 2018, Units 1 and 2 were

permanently retired.[40] MDEQ concluded that there are no other units at Plant Morrow that are BART-eligible, and therefore, the facility has no further BART obligations.

6. Cooperative Energy – Plant Moselle Unit 3

Plant Moselle Unit 3, located in Moselle, Mississippi, and owned and operated by Cooperative Energy, has been identified by MDEQ as BART-eligible. Plant Moselle is located approximately 170 km north of Breton. Plant Moselle is an electric generating facility that currently has one natural gas-fired unit (Unit 3). Plant Moselle conducted CALPUFF modeling for Unit 3 in 2011 using CALPUFF Version 5.8 Level 070623. The modeling analysis demonstrated a maximum 98th percentile 24-hour average visibility impact over the three years modeled of 0.05 dv, and a 22nd highest day's visibility impact over all three years of 0.042 dv.

Given that the original modeling was conducted years ago, MDEQ also performed a supplemental emissions analysis for this facility. MDEQ compared more current (2016-2018) SO_2, NOx, and PM_{10} emissions values from annual emissions reports submitted by Plant Moselle with the 2001-2003 baseline emissions values and showed that recent emissions have remained roughly equivalent to or decreased relative to the baseline period modeled. Therefore, MDEQ concluded that it is not necessary to remodel using recent emissions. The comparison of modeled 2001-2003 maximum 24-hour emissions rates of SO_2, NOx, and PM_{10} to updated 2016-2018 maximum 24-hour emissions rates is shown in Table 8. The State's evaluation found that the 2016-2018 maximum 24-hour SO_2 emissions rate was equivalent to the modeled value (0.25 lb/hr vs. 0.24 lb/hr). MDEQ notes maximum 24-hour average NOx and PM_{10} emissions rates from 2016-2018 are less than the modeled emissions rates. In addition, Table 9 compares the

[40] A copy of the Acid Rain and CSAPR Trading Programs Retired Unit Exemption Form is located in Appendix L.4.2 of the draft BART SIP.

annual 2001-2003 baseline emissions of SO_2, NOx, and PM_{10} to 2016-2018 annual emissions. MDEQ concluded that the 2016-2018 annual emissions of SO_2, NOx, and PM_{10} are less than the baseline emissions.

Table 8: Plant Moselle Modeled 2001-2003 and 2016-2018 Maximum 24-Hour Emissions Rates

Emissions Period (date)	Maximum 24-hour Emissions Rates Emissions (lb/hr) (2001-2003)			Maximum 24-hour Emissions Rates Emissions (lb/hr) (2016-2018)		
	SO_2	NOx	PM_{10}	SO_2	NOx	PM_{10}
Unit 3	0.24	245.25	6.50	0.25	217.25	3.21

Table 9: Plant Moselle Baseline (2001-2003) and Current (2016-2018) Period Annual Emissions Comparison

Year	Annual emissions (tons)		
	SO_2	NOx	PM_{10}
2001	0.85	249.56	6.59
2002	0.63	317.39	7.80
2003	0.56	344.65	6.93
2016	0.11	56.35	1.37
2017	0.09	43.42	1.14
2018	0.11	58.79	1.36

MDEQ concluded that Plant Moselle is not subject to BART, and no further BART analysis is required because the 98th percentile 24-hour average visibility impact of 0.05 dv is well below the State's 0.5 dv contribution threshold for BART, 2016-2018 annual emissions of SO_2, NOx, and PM_{10} have declined from 2001-2003 levels, and maximum 24-hour emissions rates of SO_2, NOx and PM_{10} have remained equivalent to (SO_2) or declined (NOx and PM_{10}) since the 2001-2003 baseline period modeled.

7. Mississippi Power Company – Plant Watson Units 4 and 5

Plant Watson Units 4 and 5, located in Gulfport, Mississippi, and owned and operated by Mississippi Power Company, have been identified by MDEQ as being BART-eligible. Plant Watson is 45 km from Breton. Plant Watson is an electric generating facility that has two

natural-gas fired units (Units 4 and 5). These units were previously capable of firing coal and fuel oil. Plant Watson conducted CALPUFF modeling in 2012 for Units 4 and 5 using CALPUFF Version 5.8 Level 070623 and assuming that these units would convert to firing only natural gas. The modeling analysis demonstrated a maximum 98th percentile 24-hour average visibility impact of 0.48 dv over the three years modeled, and a 22nd highest day's visibility impact over all three years of 0.46 dv. Since the 2012 CALPUFF modeling was conducted, Units 4 and 5 were modified in 2015 by removing all liquid burning equipment and dismantling the coal handling systems. Now both units are physically limited to burn natural gas only.[41] Although the 2012 modeled values are below the State's contribution threshold for sources that are subject to BART, these changes at Plant Watson reduced annual emissions of visibility-impairing pollutants such that the source elected to model using more recent emissions. On behalf of Mississippi Power Company, Southern Company Services performed updated CALPUFF modeling on Units 1 and 2 using current emissions (i.e., 2017-2019) and the current EPA-approved version of CALPUFF. The modeling analysis predicted a maximum annual 98th percentile 24-hour average visibility impact of 0.44 dv over the three years modeled, and a 22nd highest day's visibility impact over all three years of 0.41 dv. MDEQ concluded that Plant Watson's Units 4 and 5 are not subject to BART, and thus, no further BART analysis is required because the 98th percentile 24-hour average visibility impact of 0.44 dv is below the State's 0.5 dv contribution threshold for BART.

B. EPA's Evaluation of Mississippi's BART SIP

[41] In an April 9, 2015, letter to MDEQ, Mississippi Power Company requested a modification to its title V permit for Plant Watson to reflect actions to render Units 4 and 5 incapable of combusting any solid or liquid fuels. These activities included the removal of liquid fuel burning equipment and the permanent dismantlement of the coal handling system. MDEQ issued a revised title V permit and acid rain permit on December 29, 2016. These documents are located in the docket for this proposed action for informational purposes.

1. Overview

EPA proposes to find that the draft BART SIP corrects the deficiencies arising from Mississippi's prior reliance on CAIR to meet certain regional haze requirements that resulted in EPA's limited disapproval of Mississippi's regional haze plan. Because this was the sole deficiency leading to EPA's prior limited disapproval, the Agency is also proposing to withdraw that limited disapproval and to fully approve the State's regional haze SIP.

As discussed above, Plant Morrow's BART-eligible Units 1 and 2 permanently retired in 2018, and EPA therefore proposes to approve the State's finding that this source is exempt from further BART analysis. The remaining six facilities all modeled below the State's BART contribution threshold of 0.5 dv. As explained previously, modeling for four facilities (Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle) was conducted in the early 2010s with earlier versions of CALPUFF. For these facilities, EPA evaluated potential impacts of changes to the CALPUFF modeling system, and, as discussed in Section III.B.2, EPA believes that the modeling system changes do not significantly affect the modeling results for these sources. In addition, EPA agrees with the State's analyses of the modeling results and the supplemental emissions analyses, as discussed in Section III.B.3, below. Thus, EPA proposes to approve the State's determination that Baxter Wilson, Gerald Andrus, Plant Chevron, Plant Daniel, Plant Moselle, and Plant Watson are not subject to BART, and no further BART analysis is required of these sources.

2. Assessment of CALPUFF Modeling System Changes

MDEQ opted to rely on existing BART exemption modeling for four sources, Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle, which utilized older versions of the CALPUFF modeling system. For this reason, EPA assessed whether the updates to the

CALPUFF modeling system could affect the modeling results for these four sources such that they would become subject to BART. EPA first considered the changes to the CALPUFF modeling system and an earlier analysis prepared by an EPA contractor, and found that these changes are generally unlikely to result in significant differences in modeled visibility impacts. Second, EPA analyzed Plant Watson's modeling results under both the current CALPUFF model and the older version of the model used by Baxter Wilson, Gerald Andrus, and Plant Moselle. This analysis accounts for the significant similarities between the emissions profiles of Plant Watson and the other plants, and further corroborates that using the updated CALPUFF model is unlikely to result in the other plants becoming subject to BART. Thus, EPA proposes to find that it is not necessary to remodel Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle using the current EPA-approved version of CALPUFF.

CALPUFF Modeling System Versions Used for Mississippi's BART-Eligible Sources

The initial BART exemption modeling utilized CALPUFF and CALMET Version 5.8 Level 070623 for all sources except Plant Chevron, which utilized CALPUFF version 5.754 Level 060202 and CALMET version 5.7. The EPA-approved version of the CALPUFF modeling system has since been updated to Version 5.8.5 Level 151214.[42] Specific updates to the CALPUFF and CALMET models since Version 5.8 are summarized below:

- December 4, 2013 – CALPUFF and CALMET updated from Version 5.8 to Version 5.8.4 Level 130731. Changes are described in Model Change Bulletins E, F, and G.[43]

[42] *See* EPA, CALPUFF Modeling System, available at: https://www3.epa.gov/ttn/scram/7thconf/calpuff/Previous_SCRAM_CALPUFF_Posting_Reference.pdf.

[43] Bulletins E, F, and G are available at https://www3.epa.gov/ttn/scram/models/calpuff/calpuff_mcb_e.txt, https://www3.epa.gov/ttn/scram/models/calpuff/calpuff_mcb_f.txt, and https://www3.epa.gov/ttn/scram/models/calpuff/calpuff_mcb_g.txt, respectively.

This update included bug fixes only and no enhancements or new features.

- July 26, 2016 – CALPUFF and CALMET updated to Version 5.8.5 Level 151214 which is the current EPA-approved version of the models. This was the version of CALUFF used in revised modeling for Plants Watson and Daniel. Changes are described in Model Change Bulletin H.[44] This update included program fixes to the PRIME downwash algorithm along with updates to eliminate specific compilation and list file errors.

A December 3, 2013, memorandum prepared by an EPA contractor summarized the changes to the CALPUFF modeling system described in Model Change Bulletins E, F, and G, and the potential effect of those changes on predicted pollutant impacts for several scenarios and source types.[45] This memorandum broadly concluded that the changes to the CALPUFF modeling system resulted in no difference, or almost no difference (+/- 1 percent (%)), in predicted values for most scenarios and source types evaluated.

In addition to the differences in CALPUFF versions, three sources (Baxter Wilson, Gerald Andrus, and Plant Chevron) used Version 6.292 Level 110406 of the CALPOST processor (one of the components of the CALPUFF modeling framework), while four sources (Plant Daniel, Plant Morrow, Plant Moselle, and Plant Watson) used Version 6.221 Level 080724. Use of either version of CALPOST is consistent with EPA policy in this context.[46]

Further Evaluation of CALPUFF Model Changes at Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle

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[44] https://www3.epa.gov/ttn/scram/models/calpuff/calpuff_mcb_h.txt.
[45] AMEC, AERMOD Technical Assistance – Modification of CALPUFF and CALMET Final Report (December 3, 2013), available at: https://www3.epa.gov/ttn/scram/models/calpuff/CALPUFF_Update_Memo_12032013.pdf.
[46] This context refers to calculating visibility using the new IMPROVE equation through CALPOST Method 8. *See* p.71 of the November 2012 Plant Watson modeling report (Appendix B). This modeling report is included in the docket for this rulemaking. The IMPROVE Equation is available at: http://npshistory.com/publications/air-quality/flag-2010.pdf.

EPA also performed a specific assessment of the potential impacts of these updates to the EPA-approved version of the CALPUFF modeling system on the visibility results for Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle. Because the emissions profile and visibility impact for Plant Watson is similar to these four sources, and Plant Watson also used an earlier version of CALPUFF, EPA analyzed Plant Watson modeling information using the earlier and current versions of CALPUFF as a point of comparison to illustrate the effect of the CALPUFF model changes. Emissions from Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle were all dominated primarily by NOx and secondarily by $PM_{10,}$ similar to Plant Watson. The predicted visibility impacts from these five facilities on the nearest Class I areas were dominated by NOx emissions, accounting for 86% of the visibility impacts from Plant Watson and 90% to 98% of the visibility impacts from the remaining facilities.[47] The magnitude of NOx emissions from Baxter Wilson, Gerald Andrus, and Plant Watson are greater than the magnitude of NOx emissions from Plants Chevron and Moselle. With the noted similarities in the emissions profiles and predicted visibility impacts in the initial modeling performed for these facilities, the updated modeling performed for Plant Watson using the current EPA-approved version of CALPUFF and recent emissions data provides insight on the potential effects of updates to the CALPUFF modeling system on predicted visibility impacts for Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle.

The modeling performed for Plant Watson in 2020 using 2017-2019 emissions data and the current EPA-approved version of CALPUFF indicated similar visibility impacts as those predicted by the 2012 modeling: 91% of the visibility impacts at Breton due to the facility are the

[47] Breton is the nearest Class I area for Plant Watson, Baxter Wilson, Plant Chevron, and Plant Moselle, and Caney Creek is the nearest Class I area for Gerald Andrus.

result of NOx emissions, 8% of the visibility impacts are the result of PM_{10} emissions, and only 1% of the visibility impacts are the result of SO_2 emissions. A comparison of emissions utilized in the initial modeling for Plant Watson compared to the emissions utilized in the revised modeling for Plant Watson is presented in Table 10 along with the contribution to visibility impacts from each pollutant.

Table 10: Emissions Rates Modeled and Visibility Impacts for Plant Watson

Pollutant	2012 Modeling Contribution to Visibility Impacts (%)	2020 Modeling Contribution to Visibility Impacts (%)	2012 Modeling Emissions Rate (lb/hr)	2020 Modeling Emissions Rate (lb/hr)	Change in 2012 to 2020 Modeled Emissions Rates (%)
SO_2	1%	1%	4.99	4.08	-18%
NOx	86%	91%	2,491.39	2,141.34	-14%
PM_{10}	13%	8%	62.32	66.94	+7%

The 2017-2019 emissions rates used in the 2020 BART exemption modeling for Plant Watson changed relative to the 2003-2005 emissions rates used in the source's initial 2012 modeling as follows: NO_x emissions decreased by 14%; PM_{10} emissions increased by 7%; and SO_2 emissions decreased by 18%; in addition, SO_2 emissions remained substantially lower than NO_x and PM_{10} emissions.

The 2020 modeling for Plant Watson indicated that the maximum 98th percentile 24-hour average visibility impact at Breton over the three years modeled decreased by 10% relative to the initial 2012 modeling. The 2020 modeling also indicated that the 22nd highest day's visibility impact over the three years modeled decreased by 11% relative to the initial 2012 modeling. This information is presented in Table 11. Table 11 indicates that the 10-11% reduction in predicted visibility impacts is closely correlated to the 14% reduction in the NO_x emissions rate. These results suggest that the reductions in predicted visibility impacts are primarily due to the 14% reductions in NOx emissions rather than the updates to CALPUFF.

Table 11: Comparison of Initial Modeling to Revised Modeling for Plant Watson

	Max 98th Percentile Over 3 Years Modeled (dv)	22nd Highest Day Over 3 Years Modeled (dv)	NOx Emissions Rate (lb/hr)	PM_{10} Emissions Rate (lb/hr)
Initial 2012 Modeling	0.482	0.457	2,491.4	62.3
Revised 2020 Modeling	0.436	0.408	2,141.3	66.9
2012 to 2020 Change (%)	-9.5%	-10.7%	-14.1 %	+7.4%

The updated modeling performed for Plant Watson using the current EPA-approved version of CALPUFF and recent emissions data suggests that the updates to the CALPUFF model did not significantly affect predicted visibility impacts for Plant Watson. Instead, the predicted changes in visibility from Plant Watson between the initial and revised modeling appear to be driven by NOx emissions reductions. With the noted similarities in the emissions profiles and predicted visibility impacts between Plant Watson and Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle, the updates to CALPUFF are also not expected to have a significant impact on predicted visibility impacts from these other facilities. Revised modeling performed with the current EPA-approved version of CALPUFF and recent emissions for these facilities would likely result in visibility impacts the same as or less than the values from the 2011/2012 modeling shown in Table 12 because recent emissions have either remained equivalent to or decreased since the 2011/2012 modeling. Therefore, the reduction in NOx and PM_{10} emissions shown in Table 12 would suggest a corresponding decrease in visibility impact at the nearest Class I area.

Table 12: 2011/2012 Visibility Modeling Results and Changes in Recent NO_x and PM_{10} Emissions for Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle

FACILITY	Nearest Class I Area	2011/2012 Modeled DV Impact[48]	NOx Contribution to Visibility Impact (%)	Percent (%) Change in NOx Emissions[49]	PM_{10} Contribution to Visibility Impact (%)	Percent Change in PM_{10} Emissions[50]
Baxter Wilson	Breton	0.49	96%	-80%	3%	-58%
Gerald Andrus	Caney Creek	0.15	98%	-54%	2%	-13%
Plant Chevron	Breton	0.27	90%	-25%	9%	0%
Plant Moselle	Breton	0.05	92%	-11%	7%	-57%

As previously noted, Plant Chevron used a different version of CALPUFF (Version 5.754) than Plant Watson used in its initial modeling (Version 5.8). While EPA did not specifically analyze the changes from CALPUFF Version 5.754 to 5.8 (or from 5.754 to the current version), EPA nonetheless believes that updating the modeling for Plant Chevron is not necessary. As previously shown, the updates to Version 5.8 of the CALPUFF model did not significantly affect predicted visibility impacts for Plant Watson. Instead, the predicted changes in visibility from Plant Watson between the initial and revised modeling appear to be driven by NOx emissions reductions. If EPA assumes a similar relationship also holds true for Plant Chevron, then the Agency would expect updated modeling to show decreased visibility impact for Plant Chevron. That is, the 2011 modeling for Plant Chevron indicated a maximum 98th percentile 24-hour impact of 0.27 dv over the three years modeled, which is well below the value of 0.5 dv. The reduction in NOx emissions shown in Table 12 for Plant Chevron would suggest a corresponding decrease in visibility impact at Breton. Specifically, if EPA assumed that any

[48] The maximum 98th percentile 24-hour visibility impact over the three years modeled.
[49] Percent decrease in NOx emissions from the emissions used in the 2012 modeling to emissions that would be used in the 2020 modeling. Detailed emissions data for each of the four facilities are presented in Section III.A.
[50] Percent decrease in PM_{10} emissions from the emissions used in the 2012 modeling to emissions that would be used in the 2020 modeling. Detailed emissions data for each of the four facilities are presented in Section III.A.

visibility impact changes would be solely due to changes in NOx emissions, then the visibility impact of updated modeling would be approximately 0.21 dv.[51] In addition, while EPA is not aware of evidence indicating that CALPUFF Version 5.754 underpredicts visibility impacts relative to the current CALPUFF version, even were this to be true, the Agency thinks it is extremely unlikely that would cause the visibility impact to rise above 0.5 dv, given that Plant Chevron initially modeled 0.27 dv and the subsequent emission reductions at the source.

3. Evaluation of Supplemental Emissions Analyses and Operational Changes at Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle

EPA agrees with the supplemental emission analyses performed by MDEQ for Baxter Wilson, Gerald Andrus, Plant Chevron and Plant Moselle.

Baxter Wilson

Even though the 2012 modeling for Baxter Wilson indicated visibility impacts below but near the 0.5 dv threshold (0.49 dv), there have been operational changes that have significantly reduced the emissions from this facility, including the shutdown of the larger of the two units at this facility. These changes have resulted in substantial reductions in both annual and maximum 24-hour emissions of SO_2, NOx, and PM_{10} relative to the baseline period modeled as shown in Tables 4 and 5.

Gerald Andrus

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[51] The basis for the estimated impact of 0.21 dv due to NOx reductions alone is as follows. The 2011 CALPUFF modeling for Plant Chevron indicated that 90% of visibility impacts at Breton were from NOx emissions which equates to approximately 0.243 dv (90% of the total estimated impact of 0.27 dv). The remaining 10% of visibility impacts are due to PM_{10} and SO_2 emissions which equates to approximately 0.027 dv (10% of 0.27 dv). To approximate the impact of the 25% reduction in NOx emissions from Plant Chevron, EPA decreased the portion of the visibility impacts due to NOx emissions (0.243 dv) by 25% (0.243 * (1-0.25) = 0.182 dv). The PM_{10} and SO_2 portion of the visibility impacts remains at 0.027 dv. Thus, the revised estimated total visibility impact from Plant Chevron on Breton is 0.21 dv (0.182 + 0.027 = 0.209 dv (rounded to 0.21)).

The 2012 modeling for the Gerald Andrus indicated visibility impacts of 0.15 dv, which is well below the 0.5 dv threshold. As shown in Table 6 above, recent maximum 24-hour emissions rates of SO_2 are essentially the same as those modeled in 2012 while NO_x and PM_{10} maximum 24-hour emissions rates have decreased substantially. Overall the recent annual emissions of SO_2, NOx, and PM_{10} have drastically reduced at Gerald Andrus as shown in Table 7.

Plant Chevron

The 2011 modeling for Plant Chevron indicated visibility impacts of 0.27 dv, which is well below the 0.5 dv threshold. While recent annual emissions of SO_2 have increased relative to the baseline period modeled, the magnitude of the facility's current maximum 24-hour SO_2 emissions rate remains relatively low (8 lb/hr) compared to its NOx emissions rates (420 lb/hr) for all four units combined (see Table 2), and CALPUFF predicted that visibility impacts from Chevron were dominated by NOx emissions. During the same period, maximum 24-hour NOx emissions rates have decreased by about 25% while PM_{10} maximum 24-hour emissions rates are essentially unchanged.

Plant Moselle

The 2011 modeling for Plant Moselle indicated visibility impacts of 0.05 dv which is well below the 0.5 dv threshold. As shown in Table 8 above, recent maximum 24-hour emissions rates of NO_x, SO_2, and PM_{10} are equivalent to or less than those modeled in 2011.

Based on the State's submission and EPA's analysis in this section and Section III.B.2, EPA proposes to approve MDEQ's finding that the four facilities (i.e., Baxter Wilson, Gerald Andrus, Plant Chevron, and Plant Moselle) remain exempt from further BART review.

4. Evaluation of Updated Modeling at Plant Daniel and Plant Watson

Plant Daniel and Plant Watson have updated BART exemption modeling using current emissions of SO_2, NOx, and PM to reflect the emissions changes as a result of the operational changes at each plant. The updated BART exemption modeling also used a newer version of CALPUFF, which is the current EPA-approved version. EPA believes the updated modeling analyses for Plant Daniel and Plant Watson properly reflect additional emissions controls and operational changes that have reduced emissions since the original modeling was conducted. For both facilities, the updated modeling shows that the two facilities model below the BART contribution threshold. Therefore, EPA proposes to approve MDEQ's finding that these facilities are also exempt from further BART review.

5. Federal Land Manager (FLM) Review

MDEQ provided the draft BART SIP to the FLMs to review in accordance with 40 CFR 51.308(i)(2), and the FLMs have not provided any comments. MDEQ's draft BART SIP references the procedures for continuing consultation between the State and FLMs on the implementation of the State's visibility protection program in accordance with 40 CFR 51.308(i)(4) that are contained in Section 11 of the State's September 22, 2008, regional haze plan.[52] These procedures remain in effect for the draft BART SIP.

6. Summary

In summary, EPA proposes to approve the draft BART SIP and finds that it corrects the deficiencies that led to the limited approval and limited disapproval of the State's regional haze SIP; to withdraw the limited disapproval of Mississippi's regional haze SIP; and to fully approve

[52] The draft BART SIP references Section 10, but EPA believes the State meant to refer to Section 11.

Mississippi's regional haze SIP as meeting all regional haze requirements of the CAA for the first implementation period, replacing the prior limited approval.

IV. Summary and EPA's Evaluation of Mississippi's Progress Report and Adequacy Determination

A. Regional Haze Progress Report

This section includes EPA's analysis of Mississippi's Progress Report and an explanation of the basis for the Agency's proposed approval. EPA cannot take final action to approve Mississippi's Progress Report unless the Agency finalizes its proposal to approve the draft BART SIP because the existing regional haze SIP contains a deficiency in its current strategy to achieve RPGs.

1. Control Measures

In its Progress Report, Mississippi summarizes the status of the emissions reduction measures that were relied upon by the State in its regional haze plan. The measures include, among other things, applicable federal programs (e.g., federal consent agreements, federal control strategies for EGUs, Maximum Achievable Control Technology standards, and mobile source rules). Additionally, MDEQ highlighted control programs and measures that were not relied upon in its regional haze plan which provide further assurances that visibility impacts from Mississippi's sources are addressed (e.g., EPA's MATS Rule and measures taken by certain sources to address the 2010 1-hour SO_2 NAAQS). In the Progress Report, MDEQ also reviewed the status of BART requirements for the non-EGU BART-subject sources in the State – Chevron Pascagoula Refinery (Chevron Refinery) and Mississippi Phosphates Corporation (MPC) – both

located in Pascagoula, Mississippi, and notes that it will address BART for the aforementioned BART-eligible EGUs in a separate SIP submittal.[53]

As discussed in Section II of this notice, a number of states, including Mississippi, submitted regional haze plans that relied on CAIR to meet certain regional haze requirements. EPA finalized a limited disapproval of Mississippi's regional haze plan due to this reliance on CAIR. In its draft BART SIP, Mississippi determined that none of its seven BART-eligible facilities with EGUs formerly subject to CAIR are subject to BART.

Mississippi's draft BART SIP explains the status of each BART-eligible EGU formerly subject to CAIR. Table 1 identifies the 14 BART-eligible units (located at seven facilities) and the highest modeled impact at the nearest Class I area for each facility. Section III of this notice explains the status of each BART-eligible EGU in greater detail.

In the State's regional haze plan and Progress Report, Mississippi focuses its assessment on SO_2 emissions from coal-fired boilers at EGUs and industrial boilers because of VISTAS' findings that ammonium sulfate accounted for 69-87 % of the visibility-impairing pollution in all of the VISTAS states, except one coastal area, based on 2000 to 2004 data. The emissions sensitivity analyses conducted by VISTAS predicted that reductions in SO_2 emissions from EGU and non-EGU industrial point sources would result in the greatest improvements in visibility in the Class I areas in the VISTAS region, more than any other visibility-impairing pollutant. Thus, Mississippi concluded that reducing SO_2 emissions from EGU and non-EGU point sources would have the greatest visibility benefits for the Class I areas impacted by Mississippi sources.[54]

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[53] Subsequent to submittal of the Progress Report, Mississippi addressed EGU BART in its draft BART SIP, which is discussed in Section III of this notice.

[54] *See* 77 FR 11887 (February 28, 2012).

Because many states had not yet defined their criteria for identifying sources to evaluate for reasonable progress at the time Mississippi was developing its September 22, 2008, regional haze plan, Mississippi initially applied its criteria for identifying emissions units eligible for a reasonable progress control analysis as a screening tool to identify Class I areas outside of the State potentially impacted by Mississippi sources.[55] Mississippi only identified SO_2 emissions from E.I. DuPont Delisle (DuPont) and Plant Watson as potentially impacting visibility at Breton in Louisiana for reasonable progress during the first implementation period.[56] However, when Louisiana completed its reasonable progress assessments and finalized its regional haze SIP submittal, it did not identify any Mississippi sources as impacting Breton using Louisiana's evaluation criteria. Thus, MDEQ concluded, and EPA agreed, that no further evaluation of Dupont and Plant Watson was needed for reasonable progress and MDEQ updated its 2008 regional haze plan in the May 9, 2011, amendment with this conclusion.[57]

EPA proposes to find that Mississippi has adequately addressed the applicable provisions under 40 CFR 51.308(g) regarding the implementation status of control measures because the State described the implementation of measures within Mississippi, including BART for NOx, SO_2, and PM at its BART-subject sources for non-EGUs in its Progress Report and for EGUs in its draft BART SIP.

2. Emissions Reductions

As discussed in Section IV.A.1. of this notice, Mississippi focused its assessment in its regional haze plan and Progress Report on SO_2 emissions from coal-fired boilers at point sources

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[55] As noted earlier, Breton in Louisiana, Sipsey in Alabama, and Caney Creek in Arkansas are the closest Class I areas to Mississippi. With respect to reasonable progress, Louisiana, Alabama, and Arkansas did not identify any Mississippi sources as having an impact on the visibility at Breton, Sipsey, and Caney Creek, respectively.
[56] *See* 77 FR 11888 (February 28, 2012). *See also* page 14 of the Progress Report.
[57] *See* 77 FR 11888 (February 28, 2012).

in Mississippi because of VISTAS' findings that ammonium sulfate is the primary component of visibility-impairing pollution in the VISTAS states based upon 2000 to 2004 data.[58] In its Progress Report, MDEQ provides a bar graph with Mississippi's EGU SO_2 emissions from 2002 to 2017 and states that these emissions have decreased from 65,741 tons in 2002 to 2,569 tons in 2017. MDEQ notes that these emissions are trending downward overall, with significant decreases from 2014 to 2016 (following increases in 2013 and 2014 due to emissions from Plant Watson) and consistently low values in 2016 and 2017 due to the conversion of Plant Watson from coal to natural gas in 2015.[59]

Mississippi includes cumulative VOC, $PM_{2.5}$, PM_{10}, SO_2, and NOx emissions data from 2002, 2007, and 2014 for EGUs and non-EGUs in the State, along with the 2018 emissions projections from its 2008 regional haze plan. The 2007 actual emissions data were developed through the Southeastern Modeling, Analysis and Planning (SEMAP) partnership. At the time of Progress Report development, the 2014 National Emissions Inventory (NEI) was the latest available inventory.[60] EPA's NEI is a comprehensive and detailed estimate of air emissions for criteria pollutants, criteria pollutant precursors, and hazardous air pollutants from air emissions sources that is updated every three years using information provided by the states and other information available to EPA.[61]

According to MDEQ, EGU emissions are near or below the 2018 projections for all pollutants except SO_2. As noted in Section III.A.7., Plant Watson converted from coal to natural

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[58] The Progress Report also documents that sulfates continue to be the biggest single contributor to regional haze at Breton. *See* Section IV.A.5 for additional information.
[59] The Progress Report identifies Plant Watson as "Watson Electric" on page 10 in Figure 1 and in the associated note. The Progress Report notes that Plant Watson converted to natural gas in 2014 on page 16; the correct date is 2015 as stated on page 10.
[60] *See* EPA's website for additional data and documentation for the 2014 version of the NEI (https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data).
[61] EPA's NEI is available at https://www.epa.gov/air-emissions-inventories/national-emissions-inventory.

gas in 2015, and the source's SO_2 emissions dropped from 70,667 tons in 2014 to 5.1 tons in 2017 and 4.6 tons in 2018. MDEQ notes that this change in emissions from 2014 to 2018 at Plant Watson brings the State's EGU SO_2 emissions closer to the 2018 value of 15,213 tons projected in the regional haze plan (see Table 13).[62] The emissions reductions identified by Mississippi are due, in part, to the implementation of measures included in the State's regional haze plan.

Since the time of SIP development and submission, more recent emissions data has become available for Mississippi's EGUs and non-EGUs from the 2017 NEI, which are reflected in Tables 13 and 14. For Mississippi's EGUs, actual emissions from the NEI for 2017 are below the 2018 projected emissions shown in Table 13 for all pollutants except VOC and NOx. Of particular note is that 2017 actual SO_2 emissions of the State's EGUs are well below (2,877 tpy) the 2018 projected value of 15,213 tpy of SO_2.

Table 13: EGU Emissions Inventory Summary for Mississippi (tpy)

Year/Source	VOC	NOx	$PM_{2.5}$	PM_{10}	SO_2
2002 (VISTAS)	648	43,135	1,138	1,633	67,429
2007 (SEMAP)	669	48,150	1,426	2,165	75,563
2014 (NEI)	349	21,686	1,829	2,359	90,733
2018 (Projected)	1,274	21,535	7,252	7,412	15,213
2017 (NEI)	2,515	30,214	2,752	3,213	2,877

Emissions from the State's non-EGU point sources are below the 2018 emissions projections for all pollutants as shown in Table 14.

Table 14: Non-EGU Emissions Inventory Summary for Mississippi (tpy)

Year/Source	VOC	NOx	$PM_{2.5}$	PM_{10}	SO_2
2002 (VISTAS)	43,204	61,526	9,906	19,472	35,960

[62] Progress Report, page 11, Table 3.

2007 (SEMAP)	33,917	50,033	7,305	10,203	19,415
2014 (NEI)	28,885	31,761	9,363	10,769	13,450
2018 (Projected)	45,335	61,252	10,719	22,837	25,674
2017 (NEI)	24,840	13,498	6,226	7,376	5,500

Emissions data for 2018 has also become available for the State's EGUs since the time that Mississippi submitted its Progress Report, and EPA notes that Mississippi's EGUs emitted 3,189.7 tons of SO_2 in 2018,[63] well below the projected 2018 value.

In the Progress Report, MDEQ also detailed emissions reductions at the State's two non-EGU BART-subject sources, Chevron Refinery and MPC. In the State's regional haze plan, Chevron Refinery and MPC modeled visibility impacts at Breton of 3.89 dv and 0.81 dv, respectively. To satisfy a 2005 consent decree, Chevron Refinery installed numerous controls on its units by 2008 which resulted in a modeled visibility improvement of 2.99 dv at Breton.[64] With respect to MPC, the Progress Report summarized the upgrades made at the source under a November 9, 2010, Permit to Construct Air Emissions Equipment that included Best Available Control Technology emissions limits for SO_2 and sulfuric acid mist. The facility filed for bankruptcy on October 24, 2014, fully ceased operations in December of 2014, and has been permanently shut down and declared a Superfund site.[65]

Based on the information provided in the Progress Report, EPA proposes to find that Mississippi has adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding emissions reductions.

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[63] Mississippi's EGUs emitted 13,041.3 tons of NOx in 2018. *See* EPA's Air Markets Program Data website, located at: https://ampd.epa.gov/ampd/.

[64] *See* Progress Report, pp. 13-14 and the 2005 consent decree in U.S. v. Chevron, available at: https://www.epa.gov/sites/production/files/documents/chevron-cd.pdf. Table 6 of the Progress Report identifies emissions reductions from the BART-eligible units covered by the consent decree.

[65] For more information on MPC as a Superfund site, see https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0403508#bkground.

3. Visibility Conditions

40 CFR 51.308(g)(3) requires that states with Class I areas within their borders provide information on current visibility conditions and the difference between current visibility conditions and baseline visibility conditions expressed in terms of five-year averages of these annual values. Because there are no Class I areas in Mississippi, the State is not required to provide an assessment of visibility conditions under 40 CFR 51.308(g)(3) as noted in the Progress Report.

4. Emissions Tracking

In its Progress Report, Mississippi presents EGU SO_2 emissions data (from 2002 to 2017), and data from statewide actual emissions inventories for 2007 (SEMAP) and 2014 (NEI) and compares these data to the baseline emissions inventory for 2002 (actual emissions) and the projected emissions for 2018 from the State's regional haze plan. These emissions inventories, shown in Tables 15-18 include the following source classifications: point, area, biogenic (e.g., VOC from vegetation, emissions from fires), non-road mobile, and on-road mobile sources. The pollutants inventoried for these categories are VOC, NOx, $PM_{2.5}$, PM_{10}, NH_3, and SO_2.

The 2014 emissions for VOC, NOx, and NH_3 are all below the projected 2018 emissions for these pollutants. The increases in total PM_{10} and $PM_{2.5}$ from 2007 to 2014 (shown in Tables 16 and 17) are due to different methodologies for these years in calculating unpaved road emissions in the emission inventories. MDEQ notes that according to data from the Mississippi Department of Transportation, the number of miles of unpaved roads in the State have decreased from 22,547 miles in 2006 to 18,857 miles in 2014. The increase in SO_2 emissions from 105,657 tons in 2007 to 108,429 tons in 2014 was due to emissions from Plant Watson prior to the source

converting to natural gas in 2015. As noted in Section IV.A.2, the overall SO_2 emissions from EGUs decreased substantially following this conversion.

Table 15: 2002 Actual Emissions Inventory Summary for Mississippi (tpy)

Source Category	VOC	NOx	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	43,852	104,661	11,044	21,106	1,359	103,389
Area	131,808	4,200	50,401	343,377	58,721	771
On-Road Mobile	86,811	110,672	2,089	2,828	3,549	4,566
Nonroad Mobile	41,081	88,787	4,690	5,010	23	11,315
Biogenic	1,544,646	20,305	0	0	0	0
Fires	13,621	3,326	13,763	14,686	177	99
TOTAL	**1,861,820**	**331,952**	**81,896**	**387,007**	**63,829**	**120,139**

Table 16: 2007 Actual Emissions Inventory Summary for Mississippi (tpy)

Source Category	VOC	NOx	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	34,586	98,183	8,731	12,368	1,640	94,978
Area	74,755	6,091	42,758	326,350	58,774	344
On-Road Mobile	4,516	117,225	4,061	5,030	1,809	920
Nonroad Mobile	35,315	48,321	3,105	3,308	35	3,088
Biogenic	1,544,646	20,305	0	0	0	0
Fires	178,431	12,454	66,621	78,612	12,413	6,327
TOTAL	**1,872,249**	**302,579**	**125,276**	**425,668**	**74,671**	**105,657**

Table 17: 2014 Actual Emissions Inventory Summary for Mississippi (tpy)

Source Category	VOC	NOx	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	29,234	53,477	11,192	13,128	2,891	104,183
Area	47,959	19,504	122,136	977,608	64,986	951
On-Road Mobile	28,852	72,763	2,336	4,438	1,428	399
Nonroad Mobile	22,408	14,631	1,434	1,510	23	34
Biogenic	1,515,263	14,157	0	0	0	0
Fires	69,792	6,156	26,913	31,758	4,855	2,863
TOTAL	**1,713,509**	**180,658**	**164,012**	**1,028,442**	**74,184**	**108,429**

Table 18: 2018 Projected Emissions Inventory Summary for Mississippi (tpy)

Source Category	VOC	NOx	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Point	46,452	71,804	17,172	30,046	1,591	54,367
Area	140,134	4,483	53,222	375,495	69,910	746
On-Road Mobile	31,306	30,259	810	1,607	4,520	435
Nonroad Mobile	28,842	68,252	3,203	3,452	29	6,683
Biogenic	1,544,646	20,305	0	0	0	0
Fires	14,747	3,840	15,669	17,013	285	240
TOTAL	**1,806,127**	**198,943**	**90,076**	**427,613**	**76,335**	**62,471**

As discussed in Section IV.A.2, the Progress Report also contains other emissions data, including a figure displaying Mississippi's EGU SO_2 emissions from 2002 to 2017 and two tables summarizing EGU and non-EGU actual emissions data for 2002, 2007, and 2014, along with the 2018 emissions projections for the State's regional haze plan (see Tables 13 and 14 of this notice). MDEQ states that EGU SO_2 emissions have decreased from 65,741 tons in 2002 to 2,569 tons in 2017.

EPA is proposing to find that Mississippi adequately addressed the provisions of 40 CFR 51.308(g) regarding emissions tracking because the State compared the most recent updated emission inventory data at the time of SIP development with the baseline emissions used in the modeling for the regional haze plan. Furthermore, Mississippi evaluated EPA Air Markets Program Data[66] SO_2 emissions data from 2002-2017 for EGUs in the State because ammonium sulfate is the primary component of visibility-impairing pollution in the VISTAS states and EGUs are the largest source of SO_2 in the State.

5. Assessment of Changes Impeding Visibility Progress

[66] EPA Air Markets Program Data is available at: https://ampd.epa.gov/ampd/.

In its Progress Report, Mississippi documented that sulfates, which are formed from SO_2 emissions, continue to be the biggest single contributor to regional haze for Breton, and therefore focused its analysis on large SO_2 emissions from point sources.[67] In its September 22, 2008, regional haze SIP submittal, Mississippi notes that ammonium sulfate is the largest contributor to visibility impairment for Class I in the southeastern United States based upon 2000 to 2004 data, and that reducing SO_2 emissions would be the most effective means of reducing ammonium sulfate.[68] In addressing the requirements at 40 CFR 51.308(g)(5), Mississippi shows in the Progress Report that the overall contribution of sulfates toward visibility impairment at Breton[69] over the 2008-2012 period is 66% for the 20 percent haziest days and 54 percent for the 20 percent clearest days. Although the State concludes that sulfates continue to be the major component to visibility impairment at Breton, it also examines other potential pollutants of concern affecting visibility at this Class I area. Furthermore, the Progress Report shows that SO_2 emissions reductions from 2002-2017 for EGUs in Mississippi overall are decreasing, and with the conversion of Plant Watson to natural gas in 2015, are estimated to well exceed the projected emission reductions from 2002-2018 in the State's regional haze plan.

MDEQ summarized the changes in emissions from 2002 to 2014, the latest complete emissions inventory for all source categories in the State. For VOC, NH_3, and NOx, the actual emissions decreased from 2002 to 2014. For SO_2, total emissions in the State decreased from 2002, with a slight increase from 2007, due to the point source category. MDEQ explains that the increase in SO_2 emissions was due to emissions from Plant Watson which, as noted

[67] See Figures 2 and 3 in the Progress Report.
[68] See page 15 of Mississippi's September 22, 2008, regional haze SIP narrative.
[69] While Mississippi does not have any Class I areas, MDEQ reviewed particle speciation data for Breton because it is the closest Class I area.

previously, converted from coal to natural gas in 2015 and emitted 5.1 tons and 4.6 tons of SO_2 in 2017 and 2018, respectively.[70] For $PM_{2.5}$ and PM_{10}, increases in statewide $PM_{2.5}$ and PM_{10} emissions occurred from 2002 to 2014 due to increases in area source emissions for these pollutants. The increase in 2014 is due to an increase in the unpaved road dust category created by different methodologies used to calculate unpaved road emissions over the years. MDEQ notes that according to data from the Mississippi Department of Transportation, the number of miles of unpaved roads in the State have decreased from 22,547 miles in 2006 to 18,857 miles in 2014. Thus, MDEQ concludes that here have been no emissions changes that would impede progress and no significant changes in anthropogenic emissions within the State that have limited or impeded progress over the review period.

EPA proposes to find that Mississippi has adequately addressed the provisions of 40 CFR 51.308(g) regarding an assessment of significant changes in anthropogenic emissions for the reasons discussed in this section.

6. Assessment of Current Strategy

Mississippi believes that its regional haze plan is sufficient to enable potentially impacted Class I areas to meet their RPGs. MDEQ based this conclusion on the data provided in the Progress Report, including the emissions reductions of visibility-impairing pollutants from EGU

[70] As noted in Section IV.A.2, the conversion of Plant Watson from coal to natural gas in 2015 contributed to significant SO_2 emissions decreases. In addition, 2017 Mississippi EGU SO_2 emissions were 3,841 tons, which are well below the 2018 projected 15,213 tons shown in Table 13 of section IV.A.2 of this rulemaking.

and non-EGU point sources achieved in the State (summarized in Section IV.A.2).[71]

Mississippi asserts that it consulted with other states during the development of its regional haze plan for reasonable progress, including Alabama and Louisiana, and that these states indicated that Mississippi sources have no impact on the visibility at Sipsey in Alabama and at Breton in Louisiana, respectively. As discussed above, MDEQ assessed the particle speciation data for Breton indicating that sulfates continue to be the dominant contributor to regional haze in this area.

EPA proposes to find that Mississippi has adequately addressed the provisions of 40 CFR 51.308(g) regarding the strategy assessment. In its Progress Report, Mississippi assesses the particle speciation data at Breton and affirms that the focus of the State's regional haze plan on addressing SO_2 emissions in the State continues to be most effective strategy to improve visibility at Breton. Mississippi documents the overall downward emissions trends in key pollutants, with a focus on SO_2 emissions from EGUs in the State and determined that its regional haze plan is sufficient to enable Class I areas outside the State potentially impacted by the emissions from Mississippi to meet their RPGs.[72] EPA's proposed approval of the strategy assessment is also based on the fact that CAIR was in effect in Mississippi through 2014, providing some of the emission reductions relied upon in Mississippi's regional haze plan through that date; the implementation of CSAPR, which by the end of the first regional haze implementation period, reduced emissions of NO_X from EGUs formerly subject to CAIR in

[71] See Tables 3 and 4 on page 11 of the Progress Report which are reproduced as Tables 13 and 14 in this notice, with the addition of "2017 (NEI)" emissions to Tables 13 and 14.
[72] Visibility conditions for 2009-2013 are below the 2018 RPGs for Sipsey in Alabama. *See* 83 FR 64797, 64800 (December 18, 2018). For Caney Creek, visibility conditions for 2012-2016 are below the revised 2018 RPG for the 20 percent worst days and below 2000-2004 baseline conditions for the 20 percent best days. *See* 84 FR 11697, 11707 (March 28, 2019).

Mississippi; and the significant reductions of SO_2 from EGUs formerly subject to CAIR in the State due to retirements, emissions controls, and permanent conversions to natural gas as described in Section III.A.

7. Review of Current Monitoring Strategy

EPA notes that the primary monitoring network for regional haze nationwide is the IMPROVE network, which monitors visibility conditions in Class I areas. The Visibility Information Exchange Web System (VIEWS)[73] website has been maintained by VISTAS and the other regional planning organizations to provide ready access to the IMPROVE data and data analysis tools.

In its Progress Report, Mississippi states that no modifications to the existing monitoring network are necessary because it has no Class I areas and thus no monitoring strategy. EPA proposes to find that Mississippi has adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding the monitoring strategy because the State has no Class I areas.

B. Determination of Adequacy of the Existing Regional Haze Plan

In its Progress Report, MDEQ submitted a negative declaration to EPA that the existing regional haze plan requires no further substantive revision at this time to achieve the RPGs for Class I areas potentially impacted by the State's sources. The State's negative declaration is based on the findings from the Progress Report, including the findings that: actual emissions reductions of visibility-impairing pollutants in 2014 from EGUs and non-EGUs in Mississippi exceed the predicted reductions in MDEQ's regional haze plan with the exception of SO_2 for EGUs;[74] additional EGU control measures not relied upon in the State's 2008 regional haze plan

[73] The VIEWS website is located at: http://views.cira.colostate.edu/fed/SiteBrowser/Default.aspx?appkey=SBCF_VisSum.

[74] As noted in Section IV.A.2, the conversion of Plant Watson from coal to natural gas in 2015 contributed to

have occurred during the first implementation period that have further reduced SO_2 emissions; and the State's expectation that emissions of SO_2 from EGUs in Mississippi are expected to continue to trend downward.

EPA proposes to conclude that Mississippi has adequately addressed 40 CFR 51.308(h) because the emissions trends of the largest emitters of visibility-impairing pollutants in the State indicate that the RPGs for any Class I areas in other states potentially impacted by Mississippi sources will be met and because MDEQ submitted the draft BART SIP which, if finalized, would correct the deficiencies in the regional haze plan that led to the limited disapproval. As previously noted, EPA is simultaneously proposing to approve a SIP revision to address certain BART determinations for 14 EGUs. EPA cannot take final action to approve Mississippi's declaration under 40 CFR 51.308(h) unless the Agency finalizes its proposal to approve the draft BART SIP.

V. Proposed Action

EPA proposes to approve the draft BART SIP and finds that it corrects the deficiencies that led to the limited approval and limited disapproval of the State's regional haze SIP; to withdraw the limited disapproval of Mississippi's regional haze SIP; and to fully approve Mississippi's regional haze SIP as meeting all regional haze requirements of the CAA for the first implementation period, replacing the prior limited approval. EPA also proposes to approve Mississippi's October 4, 2018, Regional Haze Progress Report, as meeting the applicable regional haze requirements set forth in 40 CFR 51.308(g) and to approve the State's negative declaration under 51.308(h). EPA cannot take final action to approve Mississippi's Progress

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significant SO_2 emissions decreases after 2014. In addition, 2017 Mississippi EGU SO_2 emissions were 3,841 tons, which were below the 2018 projected 15,213 tons shown in Table 13 of section IV.A.2 of this notice.

Report and negative declaration unless the Agency finalizes its proposal to approve the draft BART SIP.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. These actions merely propose to approve state law as meeting Federal requirements and do not impose additional requirements beyond those imposed by state law. For that reason, these proposed actions:

- Are not significant regulatory actions subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Are not Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory actions because SIP approvals are exempted under Executive Order 12866;
- Do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- Do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Do not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, these rules do not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will they impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

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

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

Dated: July 23, 2020.

Mary Walker,

Regional Administrator,

Region 4.

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