



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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Tony Davis
Arkansas Department of Environmental Quality
8001 National Drive, P.O. Box 8913
Little Rock, AR 72210-8913

Dear Mr. Davis,

Thank you for the opportunity to comment on the draft revision of the Arkansas Regional Haze State Implementation Plan (SIP). I appreciate the tremendous effort that has gone into the preparation of this document.

My staff has identified a number of areas of concern in the SIP. In general, they include, but are not limited to, the level of control contemplated under BART, the approach to the reasonable progress and long term strategy requirements, and the requirement for state-to-state consultations in the development of the long term strategy. Unless addressed, these issues present approvability concerns. We stand ready to assist the Arkansas Department of Environmental Quality as you prepare the final document.

Recently, the United States Court of Appeals for the D.C. Circuit issued its ruling on the petitions for review of EPA's March 2005 Clean Air Interstate Rule (CAIR). The Court vacated the Rule and the associated federal implementation plan in its entirety, and sent both the rule and plan back to EPA for further proceedings. The United States is reviewing the opinion, and will determine an appropriate course of action once its review is complete. We will contact you as soon as we can offer any insight on how this situation may impact the Arkansas regional haze SIP.

We will work with your staff to set up a time to discuss these comments. In the meantime, if you have any questions concerning these comments, please feel free to call me at (214) 665-7242, or Joe Kordzi, of my staff at (214) 665-7186.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Guy Donaldson".

Guy Donaldson, Chief
Air Planning Section (6PD-L)

Enclosure

EPA Region 6 Comments on the Arkansas Draft Regional Haze SIP

7/21/08

1. EPA has submitted these comments on the Arkansas draft Regional Haze State Implementation Plan (RH SIP) with the intention of addressing the more significant issues that could be identified considering the review time available. Due to time and resource constraints, and the fact that that the ADEQ has elected not to submit a paper copy of the SIP (which consists of approx. 50 separate electronic files), it has not been possible to conduct a completely thorough review, particularly with regard to modeling. It is possible that additional concerns, not discovered during the review of this draft, will surface during the review of the final version of this SIP.
2. ADEQ should ensure, with the submittal of the final SIP, it demonstrates it has followed the requirements of Appendix V to Part 51. EPA also suggests that ADEQ edit the paragraph "Public Notice" on page 2.1 to include a reference to Appendix V of Part 51. Lastly, EPA suggests the documentation showing that ADEQ complied with Appendix V of Part 51 be included in SIP Appendix 2-1 ("Public Participation Process") of the final SIP submittal.
3. In general, ADEQ should ensure that it has specifically addressed each requirement of Section 51.308, even if it feels specific requirements don't apply or appear to be self evident.
4. In the final SIP submission, all graphs and charts originally produced with color coded lines and bars should be reproduced in color, as black and white reproduction does not allow the identification of the individual items. This should be ensured in both printed and electronic versions of the SIP, including all appendices.
5. In section 10.3, ADEQ states that a description of the consultation process can be found in Appendix 10.2. However, Appendix 10.2 itself contains additional appendices that are named in the sequence from "Appendix-1" to "Appendix-11," plus an additional directory entitled "Stakeholder Consultations," which itself contains an additional ten documents. It does not appear these appendices are discussed; therefore their significance is difficult to determine. Other examples exist in other appendices.
 - a) ADEQ should informatively and uniquely name all appendices and list all appendices (even the sub appendices) in the table of contents so the reader can easily determine what documents an appendix contains and where that document can be found.

- b) ADEQ should ensure each appendix is referenced within the body of the SIP text in the appropriate section, and its contents discussed and related to satisfying a particular aspect of the regional haze regulations.
6. It appears the New IMPROVE equation on page 17 should be re-written as there are font problems and the equation is not clear.
7. On page 19, ADEQ states, regarding the natural visibility conditions, "Appendix 5.1 provides calculations and methodologies. Appendix 5.2 includes a demonstration of the appropriateness of these values for Caney Creek WA and Upper Buffalo WA as well as a discussion of the reasons for the selection of the methodology." Appendix 5.1 does not appear to contain the stated material and instead contains a paper on the new IMPROVE equation. Appendix 5.2 is missing, as is Appendix 5.3, which is listed at the end of Chapter 5. It does not appear that ADEQ has provided the necessary data and calculations to enable Region 6 to assess whether it has satisfied the requirements in Section 51.308(d)(2) regarding the calculation of the natural visibility and baseline values. ADEQ should provide this information, including all data and calculations so that its calculations for natural visibility, current conditions, and consequently Arkansas' uniform rate of progress can be evaluated.
8. In its consultation letter to ODEQ, dated 8/17/07, ADEQ responds to ODEQ's concern regarding the Future Fuel Chemical Facility. Additional information should be provided that explains why this facility was not considered for inclusion in ADEQ's reasonable progress strategy. This should include emission information and the levels of control currently employed at this facility on the more significant emission sources, and an evaluation of the potential of additional controls.
9. Section 51.308(d)(4)(v) requires ADEQ to submit an emissions inventory that must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. ADEQ has supplied an inventory for the baseline year, and for 2018. EPA understands that ADEQ has emission inventory data available for 2005 and requests that it be included in the SIP. The preamble to the 1999 Regional Haze Rule (64 FR 35745) clarifies EPA authority for requiring the emission inventory of the "most recent year for which data are available," under 51.308(d)(4)(v):

"Requirements Under Section 110(a) (2) of the CAA. Visibility SIP submittals must document certain program infrastructure capabilities consistent with the requirements of section 169B(e)(2) and section 110(a)(2) of the CAA. Section 169(B)(e)(2) requires States to revise their section 110 SIPs to "contain such emission limits, schedules of compliance, and other measures as may be necessary" to carry out regulations promulgated pursuant to this section.

The EPA believes that this language authorizes EPA to ensure that States review their existing program infrastructures to ensure that the types of elements required by section 110(a)(2) for programs addressing the NAAQS are also sufficient for adoption and implementation of SIP measures for regional haze. The final rule does not include specific provisions addressing all elements of section 110(a)(2). However, section 51.308(d)(4)(iv) of the final rule requires the State to maintain and update periodically a statewide inventory of emissions of pollutants that contribute to visibility impairment. Where a State is also revising its SIP to incorporate changes to address the PM2.5 NAAQS, many of these revisions may be sufficient to address both PM2.5 and regional haze. The EPA encourages States to consider the needs of both programs when updating the provisions required by section 110 of the CAA to minimize any administrative burdens."

EPA requests that ADEQ contrast its 2005 emission inventory with that from its baseline year of 2002, and 2018, in order to serve as a check of the EI projection methodology.

10. As required by Section 51.308(d)(4)(v), ADEQ should include in its SIP a commitment to update the emission inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in its Class I areas periodically. It is suggested this commitment be placed within the "Future Monitoring Strategy" section on page 23.
11. ADEQ should confirm that all significant sources of PM, SO₂ and NO_x were included in its 2018 modeling projections, including those sources that will be online prior to 2018 (e.g., SWEPCO John W. Turk, Jr. Power Plant, Plum Point II). This is a requirement under Section 51.308(d)(3)(iv): "The State must identify all anthropogenic sources of visibility impairment considered by the State in developing its long-term strategy. The State should consider major and minor stationary sources, mobile sources, and area sources."
12. Language on page 24, states the complete 2002 emissions inventory is contained in Appendix 7.1. However, the point source data is missing, and should be supplied, in accordance with the requirements of Section 51.308(d)(v).
13. It does not appear that ADEQ has provided any information regarding its consultations with Texas, as required by Section 51.308(d)(1)(iv). As is noted in Appendix-9 (and in the Texas regional haze SIP), TX contributes more SO₄ to the visibility problem at Caney Creek than does any other state, including Arkansas. Region 6 would like to know what consultations occurred between Arkansas and Texas regarding this situation, and what attempts were made by ADEQ to secure commitments from Texas to reduce the emissions from its sources that are contributing to the visibility problems at its Class I areas.

14. It would be helpful if ADEQ listed the facility names in the BART emission reduction summaries in Tables 9.3 so the reader doesn't have to jump back and forth to Table 9.2 to get that information. In addition, a common method of referring to sources should be adopted between the tables and figures (e.g., SWEPCO, Fig 9.1 = 04-00107, Table 9.3a = AEP/Gentry, Table 9.1 = American Electric Power, Figure 4 BART modeling protocol).
15. ADEQ should greatly expand its discussion of BART in the main body of the SIP. All of the many BART appendices should be individually addressed and their significance integrated into the Section 9. Each BART source should be individually discussed and the rationale for its BART determination should be made clear.
16. ADEQ should discuss why there is not exact correspondence between those sources identified as BART (presumably BART-eligible) in Table 9.1B-2 (spreadsheet) and the BART-eligible sources listed in Table 9.1, and Table 2 of the BART Modeling Protocol in Appendix 9.2a. (e.g., Entergy Blytheville and others). ADEQ should also explain why the sources included in the BART exemption modeling protocol in Appendix 9.2d do not seem to match the listing of BART eligibles in the above mentioned spreadsheet.
17. Section 51.308(e) requires "The State must submit an implementation plan containing emission limitations representing BART and schedules for compliance with BART for each BART eligible source that may *reasonably* [emphasis added] be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area." As discussed in the BART rule (70 FR 39161):

"In setting a threshold for "contribution," you should consider the number of emissions sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. In general, a larger number of sources causing impacts in a Class I area may warrant a lower contribution threshold. States remain free to use a threshold lower than 0.5 deciviews if they conclude that the location of a large number of BART-eligible sources within the State and in proximity to a Class I area justify this approach."

Although ADEQ mentions this on page 43, it does not discuss why, when performing BART modeling, it selected a threshold of 0.5 dv. The exemption threshold value selected by ADEQ in determining whether a BART-eligible source can reasonably be anticipated to cause or contribute to visibility impairment must be specified in the SIP documentation, as must the basis for the selection of this threshold. ADEQ should discuss why the selection of a 0.5 dv threshold was determined to be reasonable under Section 51.308(e). This is especially important in light of this statement on page 4-1 of the EVIRON BART modeling report in Appendix 9.2d: "Despite these apparent visibility improvements, the cumulative visibility impacts due to all Arkansas BART sources in the post-control case still exceed 1 del-dv at most Class I areas of interest." In light of this,

Region 6 feels that ADEQ should give strong consideration to setting a lower threshold.

18. On page 43, ADEQ briefly transitions from sources that were found to be BART-eligible, to those found to be subject to BART. However, very little information was presented that describes how the BART-eligible sources were examined to determine which were actually subject to BART. ADEQ should therefore greatly expand this section of its SIP. ADEQ states that Appendix 9.2B contains the modeling input and output files for each BART-eligible source. However, these files were not found in Appendix 9.2B. Appendix 9.2C contains zipped "Entergy" and "Trinity" files but these are not discussed and it is not apparent these files cover all BART exemption modeling.
19. ADEQ should ensure that it includes in its regional haze SIP a five factor analysis for each source that undergoes a BART determination, in compliance with Section 51.308(e)(1)(ii)(A).
20. ADEQ has not adequately addressed the requirements under Section 51.308(d)(1) to address reasonable progress towards achieving natural visibility conditions. On page 59, ADEQ refers the reader to Appendix 10.1 for its reasonable progress analysis. Appendix 10.1 consists of two pages that discuss why Arkansas should not have to address the four factors that States are required to take into consideration in determining reasonable progress under CAA § 169A(g)(1) and 40 CFR §51.308(d)(1)(i)(A). ADEQ seems to be arguing that because its rate of progress, if sustained, will result in a return to natural visibility prior to 2064, then consideration of the four statutory factors are moot. As Region 6 has consistently informed States throughout the regional haze SIP development process, this interpretation of the regional haze rule is incorrect. The glidepath is an analytical requirement; it is neither a target nor a safe harbor. As such, ADEQ cannot rely on meeting the glidepath to justify its reasonable progress goals. In fact, this subject is covered under Reasonable Progress Question 3 under the 9/27/06 Q and A document:

"What if a State is on the glidepath, but can still install cost effective controls? Is it obligated to install those controls?"

From the preamble to the Regional Haze Rule (64 FR 35732), EPA explained:

"If the State determines that the amount of progress identified through the analysis is reasonable based upon the statutory factors, the State should identify this amount of progress as its reasonable progress goal for the first long-term strategy, unless it determines that additional progress beyond this amount is also reasonable. If the State determines that additional progress is reasonable based on the statutory factors, the State should adopt that amount of progress as its goal for the first long-term strategy."

The statutory factors must be applied before determining whether given emission reduction measures are reasonable. For example, even if emissions reductions from one source category are projected to be enough to achieve the uniform rate of progress towards natural background in 60 years, States should not forego an analysis of what degradation is being caused by pollutants from other source categories, or what improvements could be made by controlling them.”

Considering the influence of neighboring states on the visibility at its two Class I areas, Region 6 emphasizes that it is very important that ADEQ not only revisit this process but also reopen its consultation process under Section 51.308(d)(1)(iv) and, where appropriate, aggressively negotiate emission reductions from those states whose sources cause or contribute to visibility impairment at its Class I areas.

21. ADEQ devotes two sentences on page 64 to its consultation process and references Appendix 10.2. Region 6 does not regard this information as satisfying the consultation requirements under Section 51.308(d)(1)(iv). The following comments pertain to this:
- a) As stated elsewhere, Appendix 10.2 contains many documents, none of which are discussed or related to the regional haze SIP. Region 6 regards the State consultation requirements under Section 51.308(d)(1)(iv) as being very important to the development of Arkansas’ reasonable progress goal and ADEQ should greatly expand this part of its SIP.
 - b) Appendix E to the CENRAP modeling TSD in Appendix 8-1 indicates that the Class I areas in Arkansas are significantly impacted by other States. In fact, it appears that Texas sources contribute more to the visibility problem at Caney Creek than do Arkansas’ own sources. Other States, both inside and outside of Region 6 and CENRAP also significantly contribute to that visibility problem. However, it does not appear that ADEQ has taken any significant steps to attempt to obtain source reductions from these states.
 - c) ADEQ states it consulted with the other states and Tribes which are reasonably anticipated to cause or contribute to visibility impairment in its Class I areas. In so doing, it references Appendix 10.2. However, this appendix only contains minimal documentation on the consultations and nothing from Texas and Oklahoma.
 - d) Appendix 10.2 includes a 7/23/2007 letter sent by ADEQ to participants in its consultation process. That letter apparently describes a position ADEQ adopted in which it determined that since it projects, it will meet its Uniform Rate of Progress goals, it did not need to pursue source reductions with States whose sources affect the visibility at its Class I areas. As indicated in the previous comment above, this is a flawed strategy and has fundamentally undermined Arkansas’ consultation efforts.

22. It does not appear that ADEQ has included the Alpine Geophysical CENRAP Regional Haze Control Strategy Analysis Plan within its SIP. This document, along with the Environ/UCR Technical Support Document which was included, should be featured in its SIP, broadly discussed along with any additional pertinent data, and used to inform ADEQ in the revision of its reasonable progress goal.
23. ADEQ should greatly expand its reasonable progress section. In particular, ADEQ should provide documentation for the reasonable progress goals depicted in Table 10.3.
24. ADEQ should demonstrate, as required by Section 51.308(D)(1)(vi) that its reasonable progress goal does not represent less visibility improvement than is expected to result from implementation of other requirements of the CAA.
25. ADEQ should discuss the PSAT Source Apportionment results of the CAMx runs (Appendix E of the TSD) in the context of the development of its reasonable progress strategy and long term strategy. Region 6 also considers this a valuable tool in the consultation process for informing ADEQ of the potential emissions impact of neighboring states.
26. Region 6 does not believe that ADEQ has adequately addressed the requirements under Section 51.308(d)(3) regarding its obligation to construct a long term strategy for regional haze. As stated above, Arkansas' Class I areas are significantly impacted by sources in other States. Section 51.308(d)(3)(i) requires that Arkansas consult with any other State having emissions that are reasonably anticipated to contribute to visibility impairment in any mandatory Class I Federal area within the State. It does not appear that ADEQ has conducted that consultation for all the States that significantly affect the visibility at its Class I areas (e.g., Texas) nor does it appear that ADEQ has attempted to secure emissions reductions from those States as part of its long term strategy.
27. On page 66, ADEQ states that CENRAP and ADEQ analyses indicate that the impact of anthropogenic emissions from Arkansas sources has not been shown to appreciably affect visibility in Class 1 areas, other than the four located in Arkansas and Missouri. However, although Appendix E to the CENRAP modeling TSD in Appendix 8-1 discusses Arkansas' contribution to Class I areas to its north and west, it does not address those directly to its northeast or East (e.g., Sipsey). ADEQ should quantify the effect of its sources on the visibility of these Class I areas.
28. Regarding its consideration of the need to mitigate the impacts of construction activities on page 68, ADEQ states: "Due to certain limitations on regulatory authorities that are included in the Arkansas Water and Air Quality Control Act, the opportunities to mitigate air emissions from construction activities are limited." ADEQ should provide more information on these limitations and how they impact its ability to address this requirement.

29. On pages 69 and 71, ADEQ evaluates the need for additional control measures as part of its Long Term Strategy. Considering the above comments on Arkansas' reasonable progress goals, ADEQ should:

a) Reconsider its response on page 69 to the requirement in Section 51.308(d)(3)(v)(C) to consider emissions limitations and schedules for compliance to achieve its reasonable progress goal.

b) Correct the language on page 71:

“Since Arkansas has demonstrated that it can meet or exceed established URPs, it is not necessary to evaluate the emission reductions potential of point sources other than those BART-eligible sources that are specifically regulated in accordance with the requirements of the Regional Haze Rule.”

As stated above, the statutory factors must be evaluated before a State can conclude that additional control measures are not necessary.

30. ADEQ should indicate where in its SIP it addressed the requirement under Section 51.308(d)(3)(v)(G) to consider the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. Region 6 is particularly interested in information that would confirm the 2018 projections summarized in Table 7.2.

31. ADEQ should indicate where in its SIP it addressed the requirement under Section 51.308(d)(3)(v)(A) to consider emission reductions due to ongoing air pollution control programs, *including measures to address reasonably attributable visibility impairment* [emphasis added].

Region 6 Review of ADEQ's Responses to BART Engineering Analyses Comments Emailed on 5/1/07

Note: The following are extracted from ADEQ's response to comments Region 6 emailed on 5/1/07 concerning the BART engineering analysis that was reviewed prior to the draft SIP. Region 6 focuses herein on major points that it feels remain to be resolved, although it reserves the right to offer further comments during the final review of the SIP.

1. Arkansas Electric Cooperative's (AEC) SO₂ analysis for the Bailey and McClellan units considered two options - wet scrubbers and switching to low sulfur fuel. The wet scrubbers would have cost \$2,108.25/ton for the Bailey unit and \$1,658.32/ton for the McClellan unit. Switching to 1% sulfur fuel would have resulted in a cost to the units of \$54.90/ton and \$158.60/ton, respectively. However, the scrubbers would have removed 95% of the SO₂ in comparison to the fuel switch removing only 55% of the SO₂ at the Bailey unit, and only 65% at the McClellan unit. How was it determined that the \$2100/ton and \$1600/ton controls, which would have removed another 40% were not cost effective? Why did ADEQ not require both scrubbers and low sulfur fuel, since the latter's cost is relatively minor?

ADEQ Response: The five-factor analysis considers more than economic feasibility. ADEQ ruled out SO₂ scrubbers based on the energy impacts and non-air quality environmental impacts as well as the significant increase in costs.

Region 6 Response: Tables 9.4b and 9.4c, on page 50, indicate that even after switching to 1% sulfur fuel, these facilities are still projected to have very significant impacts on both the Caney Creek and the Upper Buffalo Class I areas. ADEQ states in its response: "The five-factor analysis considers more than economic feasibility. ADEQ ruled out SO₂ scrubbers based on the energy impacts and non-air quality environmental impacts as well as the significant increase in costs." It does not appear that ADEQ included its five factor analysis for these facilities, so Region 6 cannot evaluate the energy impacts and non-air quality environmental impacts. However, it does appear the costs are reasonable. Region 6 notes that since ADEQ states in Appendix 9.1 the primary fuel for these boilers is natural gas, a permit revision restricting the fuel to natural gas is also an option.

2. AEC proposes a switch to 1% sulfur fuel oil. On page 39171 of the July 5, 2005 BART rule (70 FR 39171), EPA states, "For oil-fired units, regardless of size, you should evaluate limiting the sulfur content of the fuel oil burned to 1 percent or less by weight." Region 6 notes that similar facilities across the U.S. use fuel oil with a sulfur content as low as 0.05%. What criteria did ADEQ use to make a determination that a lower sulfur content was not cost effective?

ADEQ Response: 0.05% fuel oil is significantly more expensive. For example, the cost could be 16 times greater than the cost of 1% sulfur content fuel oil.

Region 6 Response: Concerning BART limits for SO₂ from oil-fired units, EPA notes in 70 FR 39134 (published July 6, 2005): "States should accordingly evaluate a one percent sulfur content limitation as a starting point of their BART determination for oil-fired EGUs subject to BART." Accordingly, ADEQ should supply the documentation for the cost for lower sulfur content fuel oils, and by application of the five factors reassess whether a lower sulfur fuel oils should be required.

3. The Domtar Ashdown Mills BART analysis states on page 4-3 that even 100% SO₂ control on Boiler 1 would not significantly affect visibility at any Class I area, because that boiler burns predominantly wood products. However, R6 notes that boiler (p. 2-1) is actually permitted to burn up to 2,700,000 gallons per year of fuel oil, and the sulfur content of the fuel oil used is limited to 3.0 percent by weight. ADEQ should explain how the addition of fuel oil to the fuel mix was considered in the BART analysis, and why a restriction on burning low sulfur fuel (see above comment on sulfur content) should not be viewed as BART.

ADEQ Response: At the Department's request, Domtar revised the SO₂ limits for Boiler 1. Domtar will be restricted to an SO₂ limit of 1.12 lb/MMBtu at this source. This is consistent with the BART limits imposed on the other sources in the state.

Region 6 Response: What is the percentage of sulfur in this fuel oil?

R6 also notes both Boilers 1 and 2 are permitted to burn tire-derived fuel (TDF). The Domtar Ashdown Mills BART analysis states on page 4-3, TDF usage (total for No. 1, No. 2, and No. 3 Power Boilers) is limited to 220 tons per day. Although TDF can contain a lower sulfur content than some coals, it has been estimated to contain between 0.86 - 2.8%¹, which is potentially significant, considering the visibility impact the Domtar facility has on the visibility of the Caney Creek Class I area. Therefore, ADEQ should explain how the addition of TDF to the fuel mix was considered in the BART analysis, and why conventional sulfur control should not be considered in the BART analysis.

Domtar Response: The addition of TDF to the fuel mix was part of the composite fuel mix utilized in the BART analysis. No. 2 Power Boiler has an existing wet scrubber for SO₂ and particulate control. Since wet scrubbing is the most effective method of controlling SO₂ emissions, no additional analysis was needed for SO₂ emissions from

¹ U.S. EPA, Control of Mercury Emissions from Coal-Fired Electric Utility Boilers, April 2002, EPA-600/R-01-109, Table A-11 at: <http://www.epa.gov/appcdwww/aptb/EPA-600-R-01-109A.pdf>

No. 2 Power Boiler. On No. 1 Power Boiler, the addition of caustic to the Wet Electrostatic Precipitator was evaluated through modeling at a 90% SO₂ reduction level. The results of the modeling showed no additional improvement at Caney Creek with this amount of SO₂ control on No. 1 Power Boiler, and therefore add-on controls were not considered further.

Region 6 Response: Regarding the No. 1 boiler, Domtar states that the addition of caustic to the wet precipitator was evaluated but did not show any improvements in visibility at Caney Creek. The evaluation does not appear to be included in the SIP.

4. The Domtar Ashdown Mills BART analysis states on page 4-3 that no further BART analysis is merited for Boiler 2, since it employs a wet scrubber with a 90% control efficiency. R6 notes the presumptive limit for SO₂ control for EGUs at power plants with a total generating capacity in excess of 750 MW is 95% control or 0.15 lbs/mmBtu. This indicates EPA believes this level of control can typically be met through the use of wet scrubbers at coal fired boilers. Regarding this, ADEQ should address how pollution prevention techniques, improvements to existing controls, and combinations of inherently lower-emitting processes (70 FR 39164) were considered.

Domtar Response: The No. 2 Power Boiler is a swing boiler in a pulp and paper facility. It is not a base-loaded boiler at an EGU. As stated on page 4-3 of our BART analysis, the 90% control efficiency is the BART-based control efficiency presumed by the Central Regional Air Planning Association (CENRAP) and the Midwest Regional Planning Organization (MRPO) for pulp and paper industry power boilers.

Region 6 does not believe ADEQ has provided the kind of documentation necessary to demonstrate that it has considered, “[The use] of (and where already in place, improvement in the performance of) add-on controls, such as scrubbers, fabric filters, thermal oxidizers and other devices that control and reduce emissions after they are produced.”²

5. Domtar eliminates the use of SNCR on the No. 1 and 2 power boilers due to technical infeasibility. The No. 1 boiler is primarily wood-fired and the No. 2 boiler is primarily coal-fired. A review of the RACT/BACT/LAER Clearinghouse (Process types 11.120 and 11.190) indicates there are several wood-fired utility boilers that employ SNCR. In particular, a very similar source, the bark boiler at the Temple Inland Kraft Linerboard Mill in Orange, TX employs SNCR, Low Excess Air (LEA), and low NO_x gas burners. In addition, the Weyerhaeuser Red River Mill in Campti, Louisiana is planning on installing SNCR on its 940 MMBtu/hr hogged fuel boiler. Both of these boilers exhibit some load swing. The RACT/BACT/LAER Clearinghouse also lists numerous examples

2 70 FR 39164

of SNCR being used on coal-fired utility boilers. As a consequence, ADEQ should ensure that Domtar revises its BART analysis to consider the use of SNCR for both boilers.

6. In its letter to the ADEQ, dated March 1, 2007, Entergy addresses an ADEQ inquiry concerning why it feels the Lake Catherine Unit 4 boiler should be exempt from installing post combustion NOx controls. In its response, Entergy references the BART Guidelines (70 FR 39172):

“For oil-fired and gas-fired EGUs larger than 200MW, we believe that installation of current combustion control technology to control NOx is generally highly cost-effective and should be considered in your determination of BART for these sources. Many such units can make significant reductions in NOx emissions which are highly cost-effective through the application of current combustion control technology.”

The context of the above reference is with regard to whether EPA felt a presumptive emissions limit was appropriate for gas-fired EGUs. It was not intended to limit the consideration for BART of possible choices of cost effective post combustion controls for these sources. As a consequence, Region 6 does not believe Entergy adequately followed the BART guidelines, since it has not completed STEP 1—Identify All Available Retrofit Control Technologies, as outlined in 70 FR 39164, July 6, 2005. Region 6 requests that ADEQ direct Entergy to re-assess its BART analysis for the Lake Catherine Plant to properly assess all control options, including post combustion controls, as outlined in the BART Guidelines. This should be done for both gas and oil firing and should include documented and detailed cost estimates for all control options that are technically feasible.

Entergy should provide documentation for the efficiencies of the control equipment evaluated within its BART analysis for the Lake Catherine Plant.

ADEQ Response: ADEQ copied a response from Entergy. Summarized herein, this response stated that Entergy had run a computer program that evaluated electrical generating unit performance and the capital and O&M cost associated with each identified control technology in a stepwise fashion and stopped the analyses when it felt that a cost threshold ceiling had been met. Entergy then supplied additional information that partially evaluated some additional control options that were not evaluated in its initial analyses, such as SNCR and SCR.

Region 6 Response: ADEQ should ensure that the initial BART analysis for the Entergy the Lake Catherine Unit 4 boiler is revised to include this and the additional information that Entergy provide in response to the remaining Region 6 comments on its BART analysis. ADEQ should ensure this BART analysis specifically addresses all the steps outlined in the BART Guidelines (70 FR 39164, July 6, 2005). Region 6 emphasizes EGUs are required to follow the BART Guidelines in preparing their BART analyses.

Although Region 6 is not concerned the analyses be performed in a specific order, all the steps outlined in the BART Guidance must be specifically addressed.

7. Entergy has conducted its BART analysis for the Lake Catherine Plant assuming the use of (1) 1% sulfur fuel when the Unit 4 boiler is oil fired, and (2) a 10% future capacity factor. To R6's knowledge, these limitations of Entergy's operations are not housed within its Title V permit. ADEQ should therefore include a commitment in its SIP to modify Entergy's Title V permit in time to ensure these limitations, should they be deemed BART, are operational no later than 5 years after SIP approval.

ADEQ Response: As stated in a previous response, ADEQ has provided provisions in Reg 19 for all subject-to-BART sources to re-open their Title V permits.

Region 6 Response: This response does not address the specific questions as to whether (1) 1% sulfur fuel limit will be imposed when the Unit 4 boiler is oil fired, and (2) a 10% future capacity factor will be imposed. Neither of these limitations is discussed in Reg 19 (although there is a 0.562lb/MMBtu SO₂ limit). ADEQ should include a commitment in its SIP to modify Entergy's Title V permit in time to ensure these limitations, *should they be deemed BART*, are operational no later than 5 years after SIP approval. Region 6 has some remaining reservations regarding the level of NO_x control Entergy has proposed for BART that may be submitted during the final review that could be attenuated depending on the outcome of this issue.

8. The Entergy Lake Catherine BART analysis is limited to the analysis of the effects of the NO_x emissions for Unit 4. However, the Title V permit for the Lake Catherine Facility indicates the permitted PM and SO₂ emissions are above the de minimis limits of 40 tpy for SO₂ and 15 tpy for PM₁₀. Therefore, Entergy should either take a permit limit of these levels or lower, or Entergy should expand its BART analysis to include PM and SO₂.

Response: The Entergy Lake Catherine BART analysis included PM and SO₂ for oil firing. Species specific screening modeling conducted by ADEQ determined that PM and SO₂ emissions when combusting gas did not contribute to visibility degradation in any Class I area. Additionally,

Region 6 Response: It does not appear ADEQ finished the response to this comment.

9. The Entergy Lake Catherine and White Bluff BART analyses apparently assumes the auxiliary boiler, SN-05 is not subject to BART. Through correspondence with ADEQ, Region 6 understands Entergy's reasoning for this is the answer to No. BART 19 of the document, "Additional Regional Haze Questions," dated 8/24/07:

"Note, however, that if the auxiliary boilers are only used during startup, then since we do not model startup conditions, those boilers would not contribute any emissions to the modeled visibility impact from the source; therefore those particular boilers may be exempted."

However, SN-05 is permitted for 8760 hrs/yr of operation. Although Entergy has historically employed this unit far less than that, the potential for greater use exists due to the permit limit. Therefore, Entergy should either include SN-05 in the BART analysis assuming 8760 hrs/yr of operation, or revise its permit to reflect this unit's historical function.

Response: At the Department's request, Entergy – White Bluff accepted an operation limit of 4360 hours annually. Please refer to Regulation 19.1505 (L).

Region 6 Response: Since Entergy feels it must retain this level of operational flexibility for SN-05, then it should perform its BART analysis on this basis.