



United States
Department of
Agriculture

Forest
Service

Region 8, Southern Region
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Date: December 10, 2007

Mr. Ronald W. Gore
Chief, Air Division
Alabama Department of Environmental Management
P. O. Box 301463
Montgomery, AL 36130-1463

Dear Mr. Gore:

On November 16, the State of Alabama submitted a draft implementation plan describing your proposal to improve air quality regional haze impacts at mandatory Class I areas across your region. We appreciate the opportunity to work closely with the State through the initial evaluation, development, and, now, subsequent review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward the Clean Air Act's goal of natural visibility conditions at our Class I wilderness areas and parks.

This letter acknowledges that the U. S. Department of Agriculture, Forest Service, has received and conducted a substantive review of your proposed Regional Haze Rule implementation plan. Please note, however, that only the U. S. Environmental Protection Agency (EPA) can make a final determination about the document's completeness, and therefore, only the EPA has the ability to approve the document. The Forest Service's participation in the State of Alabama's administrative process does not waive any legal defenses or sovereignty rights it may have under the laws of the United States, including the Clean Air Act and its implementing regulations.

As outlined in a letter to the State in October 2006, our review focused on eight (8) basic content areas. The content areas reflect priorities for the Federal Land Manager agencies, and we have attached comments associated with these priorities. Note that we have highlighted comments in bold face that we feel warrant additional consultation prior to public release. We look forward to your response as required by 40 CFR 51.308(i)(3). For further information, please contact Cindy Huber at (540) 265-5156 or Ann Mebane at (307) 578-8241.

Again, we appreciate the opportunity to work closely with the State of Alabama. The Forest Service compliments you on your hard work and dedication to significant improvement in our nation's air quality values and visibility.

Sincerely,

/s/ Miera Crawford Nagy
MIERA CRAWFORD NAGY
Forest Supervisor

Enclosure



cc: Michele Notarianni
EPA Region 4
Stacy Harder
EPA Region 4

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Enclosure

Forest Service Technical Comments on ADEM's Draft Regional Haze State Implementation Plan

Overall Comments

As stated in our letter, we feel that your agency has addressed each of the priority content areas with which the Federal Land Managers (FLMs) are concerned in the draft Regional Haze Regulations State Implementation Plan (SIP), and we appreciate the clarity of the document. However we do have several areas of concern which we look forward to discussing with you during our consultation. Our concerns are addressed in more detail in our section-specific comments, and include:

- **the lack of information within the main body of the SIP about the impacts of sources outside of Alabama on Sipsey Wilderness,**
- **the lack of information within the main body of the SIP about the impacts of Alabama sources on Class I areas outside of Alabama,**
- **lack of Reasonable Progress analyses for several sources,**
- **exclusion of Oak Grove Resources from BART determination analysis,**
- **ADEMs proposal to use the Uniform Rate of Progress instead of the modeled levels for the Reasonable Progress Goals for the hazy and clear days, and**
- **incorporation of the Smoke Management Program into the SIP.**

All of these issues warrant further attention; but the Reasonable Progress Goals present our largest concerns. Setting a Reasonable Progress Goal for the worst days at the Uniform Rate of Progress and a Goal for the best days at current monitored values is inconsistent with the Regional Haze Rule. After working for many years with the southeastern states through VISTAS, it is our opinion that the CMAQ modeling provides the best estimates of visibility improvement from control strategies and therefore should be used for both worst day and best day Reasonable Progress Goals.

As part of its long-term strategy, we expect that the State will rely in great part on the new source review (NSR) and prevention of significant deterioration (PSD) programs to assure that new sources do not unduly impair the expected progress toward natural conditions. Section 7.2.1 of the November 2007 draft speaks to emissions reductions of ongoing programs but does not include a discussion of the interaction between the existing new source review program and progress on the regional haze plan. Given the uncertainty in the new source growth estimates used to develop the 2018 emissions inventory, and ultimately the 2018 visibility projections, we feel it would be appropriate for the state to discuss the relationship between the Regional Haze Plan and requirements of the NSR and PSD programs within the SIP. Specifically, how does the State anticipate addressing new sources of air pollution in the PSD process in regards to its reasonable progress goals and long term strategy; and, how will it analyze the affect of new emissions from these new sources on progress toward the interim visibility goals

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established under this SIP, as well as the ultimate goal of natural background visibility by 2064?

Finally, we recognize that the Regional Planning Organizations have provided significant resources to the states throughout the Regional Haze planning process, and that it will be detrimental to the state agencies if these resources are no longer available for subsequent planning and periodic SIP reviews. We will strongly encourage the EPA to maintain support for the Regional Planning Organizations and the integrated technical analyses that will be necessary as we begin tracking reasonable progress for the Class I areas under the Regional Haze State Implementation Plans.

Specific Comments

While overall we are satisfied with the extent of the information provided in the Alabama Draft SIP, we will expand on the three areas of concern previously expressed and provide several suggested changes that we feel may increase the clarity of the document. The following comments are organized by Section of the draft SIP.

Executive Summary:

No comment, this section has yet to be added.

Section 1: Introduction

Page 1, paragraph 2 – Change “In eastern parks,...” to “In eastern *Class I areas*,...” This better reflects that Class I areas can be parks or wildernesses.

Page 5, Figure 1.4-2 – The acreages for some of the Class I areas are incorrect. The correct acreages can be found on the spreadsheet distributed by Pat Brewer on or around October 30, 2007. The correct acreage for Sipsey Wilderness is 24,922 acres.

Page 10, Section 2.3 - The value for baseline 20% worst days for Sipsey should be expressed as a discrete value which is 29.0 dv. Likewise, natural background should also be expressed as a discrete value which is 11.0 dv

Page 11, Table 2.3-1 – According to the ARS support document and the values posted on the VIEWS website, the natural background on the average 20% worst days should be 11.0 dv and 30.3 Mm-1.

Page 11, second paragraph – Sulfate levels on the 20 % worst days account for 75% of visibility impairment at Sipsey. Also, consider changing sentence 4 to, “*On the best days at Sipsey ammonium sulfate accounts for 50% of visibility impairment.*” (See Section 3.4 of Appendix B for these values.)

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Page 13, second paragraph – Consider changing the second sentence to “Sources include *agricultural and wildland (wildfire, wildland fire use and prescribed fire) burning*, and incomplete combustion of fossil fuels.” This more accurately characterizes the types of wildland fire that occur.

Page 15, second paragraph – I did not find the CART analyses in Appendix B. Please identify the correct Appendix for this information.

Section 4.1: Baseline Emissions Inventory

Page 19, 4th paragraph – The statement, “Thus, fire emissions remain the same for air quality modeling in both the base and any future years” is misleading and should be corrected. I believe the intent may have been to say that the fire locations remained the same. In fact fire emissions for 2009 and 2018 were increased in all states except Florida to reflect anticipated increases in the use of prescribed fire as a management tool on federal lands. This is discussed in section 4.1.7 on page 21 of the draft SIP.

Page 21, Table 4.1 – It would be helpful to show values for the EGU and non-EGU point sources instead of lumping them into a single category, because they are often referred to as EGU and non-EGU throughout the document.

Section 7: Long Term Strategy

Page 42, Section 7.2.1 - Appendix H states that Cargill Sweeteners will be reducing emissions by 50% under a Consent Decree with EPA. This should be added to the list of Control Requirements that begins on Page 42.

Page 44, Smoke Management Plan section – This entire section would be better placed in Section 7.9 that addresses additional control strategies considered, because there are no calculated emissions reduction strategies for smoke as there are with the other programs listed. Wherever this section resides, there are changes that need to be made. The first statement is from the Grand Canyon Visibility Transport Commission (GCVTC) Report and applies only to the states in that area. The second sentence references Section 51.309(d) of the Regional Haze Rule which is an alternative to Section 51.308 for only those states in the GCVTC area, not Alabama. We recommend that ADEM delete the first two sentences of this section. The first sentence could be replaced with a statement that is supported by VISTAS findings or with statements regarding fire emissions that are found elsewhere in the draft SIP. The second sentence should be corrected to read “*Section 51.308(d) (3) (v) of the Regional Haze Rule requires that the State must consider, at a minimum, the following factors in developing the long-term strategy: ... (E) Smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes.*” You could then continue with the remainder of the section as it is.

Page 45, Section 7.2.2 – In conjunction with the comments above, we suggest making reference to the more complete discussion in Section 7.9, page 74.

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Page 45, Section 7.2.3, last sentence on the page – Consider changing the end of this sentence to read “...comprising more than half of remaining SO₂ emissions in *most states*...” because the referenced figures show 2018 EGU emissions to be *less than half* of remaining emissions for Georgia, Mississippi and Virginia.

Page 47, Tables 7.2.3-1 and 7.2.3-2 – Consider addition of EGU and non-EGU as subcategories of point sources, similar to what has been recommended for Table 4.1.

Page 47, Section 7.2.4, paragraph 2 – Change the first sentence to “... visibility improvement *on the worst days* by 2018 resulting from the...” for clarity.

Page 48, Figure 7.2.4-1 - Consider changing the title associated with the graphic to *Reasonable Progress Assessment for Sipsey on the Worst 20% Days*, because that is what is shown and this title makes Figures 7.2.4-1 and 7.2.4-4 more consistent with one another.

Page 48, First paragraph – Again, include the phrase “*on the worst days*” for clarity.

Page 49, Last sentence – Consider changing it to “Specifically, Figure 7.2.4-4 *demonstrates that no degradation should occur* for the Sipsey Wilderness Area, and, in fact, visibility should improve beyond that level.

Section 7.5: Area of Influence

Section 7.5 of the SIP identifies the geographic area of influence for Sipsey Wilderness. The Area of Influence (AOI) discussion is of particular importance to the Forest Service FLMs for several reasons. First, the information provided by the VISTAS Regional Planning Organization (RPO) allowed the states and FLMs to come to consensus on the realm of sources to be considered under further reasonable progress assessments for the VISTAS states, including Alabama (consultation meeting the week of June 12, 2007). Second, the AOI analysis can assist the VISTAS states in identifying sources anticipated to affect visibility in 2018 whether for Class I areas within their state, or for Class I areas in neighboring states. This source-specific information has provided a basis for state-to-state consultation both within the VISTAS region, and with states outside of the VISTAS RPO. Finally, the AOI information can assist states in highlighting which sources they may need to follow up with in subsequent planning and review periods as they track progress towards the national visibility goal. Because the AOI information can serve so many purposes we would like to see a table in the body of the SIP that provides information on sources affecting Sipsey (whether inside or outside of Alabama), as well as information on Alabama sources that affect Class I areas outside of Alabama. This is discussed further under Section 7.7.

Pages 62 & 63 - The graphics in Figures 7.5.4-1 and 7.5.4-2 could be modified to show only the AOI metrics ADEM decided to utilize (in consultation with other VISTAS states and the FLMs) to consecutively narrow the potential list of sources for inclusion in the final AOI (i.e. Only show the lines for Residence Times greater than 5% and 10%, and not the 100 and 200 km radii).

Section 7.7: Reasonable Progress

Page 69, Step 4 - We recommend the addition of a Table that shows all sources within the AOI (including those outside of Alabama) affecting Sipsey. Something similar to Table 5-2 on page H-43 of Appendix H; except that we would add county, plant name, unit descriptions, the fractional contribution to Q/d*RTMax, the 2002 and 2018 tons of sulfur dioxide emissions, and any reduction of emissions due to Reasonable Progress and BART. It is easier for a reader to have this information in the body of the SIP and not have to go to Appendices. The same or a similar table should also include Alabama sources affecting Class I areas outside of Alabama. (We suggest that ADEM contact Doris McLeod with Virginia Department of Environmental Quality to see how they are addressing this in Table 7.7.4-2 of their draft SIP.)

Page 69, Step 5 – Appendix H, Table 5.2 shows three non-EGU facilities in the AOI for Sipsey but only one, Cargill Sweeteners North America, was evaluated under “Reasonable Progress”. We feel that Solution Inc. and International Paper should also go through the four factor “Reasonable Progress” analysis if there are any units that were not addressed under BART. In addition, the four-factor analysis for Reasonable Progress should also be conducted for Alabama sources that affect Class I areas outside of Alabama. From the AOI tables in Appendix H (pages H-43-49) it appears that the following facilities should be added to Alabama’s Reasonable Progress analyses: Escambia Operating Company (Breton and St. Marks), and Sanders Lead Company (St. Marks).

Page 69, Step 5 – It would be helpful to have at least a short summary of all Reasonable Progress evaluations in the body of the SIP.

Page 69 – One use of AOI information is to identify sources that will most likely be evaluated for additional emission reductions at the mid-course review or in the next planning period. For example, while the cost of applying controls to a source may be considered prohibitive now, the same cost may be reasonable in the next planning period. It would be beneficial to add the cost information to the table of information on the sources within the AOI that are analyzed for Reasonable Progress as well as BART controls.

Section 7.8: BART

Page 73, Table 7.8.4-1 – Why was Oak Grove Resources JCDH exempted from BART when the modeled impact at Sipsey was above the threshold of 0.5?

Page 74, first paragraph, last sentence – We recommend the following change to the last sentence. “All eight EGUs demonstrated *visibility impacts below the exemption threshold for all Class I areas.*”

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Page 74, Section 7.8.5 – As we stated for Reasonable Progress, it would be beneficial to have short summaries of the BART determinations in the body of the SIP. Since there are only two sources this seems reasonable. We also would like to see the information from the summaries in a table, similar to comments under Reasonable Progress. We are interested in seeing emissions from 2002, 2018 (pre-BART) and 2018 (with BART) for the two sources that went through BART determinations.

Section 7.9: Additional Emissions Controls Considered

Page 75 – The first paragraph addresses emissions from agricultural and wildland burning and we concur that emissions of elemental carbon from this source category are a minor contributor to visibility impairment at Sipsey. We recommend that ADEM includes a statement that the prescribed fire smoke management techniques practiced currently, appear to be adequate for the purpose of visibility protection in this planning period. (ADEM could also mention that current smoke management guidelines specifically identify Class I areas as Smoke Sensitive Areas to be considered during smoke management planning.) Further we recommend that ADEM discusses the Alabama Smoke Management Program and the connection to the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, but does not include the Smoke Management Program as part of the Alabama SIP. If the Program is discussed but not included in the SIP, maximum flexibility is maintained to modify the Program on an as-needed basis without having to go through a SIP revision. This is especially important should we find that changes are needed to address human health concerns.

Page 75, last paragraph – This paragraph seems out of place, as it discusses Reasonable Progress Goals, however we agree with the strategy of revising the Goals based on the best and final modeling results which reflect the cumulative benefits of the Base G2a emissions controls, BART controls and any additional measures to achieve reasonable progress by 2018. We hope that ADEM will adopt this position and use, at a minimum, the results of the modeling for the best and worst days as their minimum reasonable progress goals, in spite of the contradiction we see in Section 8.

Page 76 - Figure 7.10-1 is very confusing and we suggest ADEM consider a different graphic or better explain what is being shown by the existing graphic.

Page 78 and 79 – We like the inclusion of WINHAZE images to demonstrate pictorially the visibility change expected from emission reductions included in the SIP.

Section 8: Reasonable Progress Goals

ADEM proposes a Reasonable Progress Goal (RPG) equal to the 2018 value for Uniform Rate of Progress (URP) for the 20% worst visibility days, and a RPG equal to the current value for the 20% best visibility days. This is inconsistent with the Regional Haze Rule, which says: “The State may not adopt a reasonable progress goal that represents less visibility improvement than is expected to result from implementation of other requirements of the CAA during the applicable planning period.” (See 40 CFR 51.308(d)(1)(B)(vi).) It’s our understanding that the 2018 visibility projections presented in Section 7.10 were based upon “emission growth” and “on the books” controls, which

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are State and Federal controls that will be implemented between the 2002 base year and the 2018 future year. (The final modeling results will also include emission reductions due to BART.) Since these projections show more improvement than the Uniform Rate of Progress, the citation listed above should lead ADEM to adopt the results of the final VISTAS modeling exercise as the minimum Reasonable Progress Goals for 2018. This includes goals for both the worst and best days.

ADEM states that the reason for adopting the URP is based on uncertainties in the modeling. As members of VISTAS, the FLMs have worked with the states to develop mutually agreeable analyses for use in preparing the Regional Haze SIPs, and as such felt there was agreement that the VISTAS analyses provide the best estimates for use in RH SIPs. It is our feeling that uncertainty is best dealt with at the mid-point review in 2013. At this time the State will assess whether emission reductions and visibility changes are consistent with expectations. If they are not, then the State has several options available, including revising the SIP and the Long-Term Strategy to better reflect emissions changes and reassessing the impact on visibility improvement, including setting new reasonable progress goals if necessary.

Section 11: Comprehensive Periodic Implementation Plan Revisions

While large sulfur dioxide emissions reductions are anticipated under CAIR, EGU emissions are expected to remain a significant contributor to regional haze in 2018 even after implementation of this Federal Rule. Given that additional EGU reductions will still be necessary after 2018, and that there is a fair amount of uncertainty surrounding the modeling analyses conducted for future year projections as well as what is actually going to occur under CAIR, the tracking and review periods under the Regional Haze Regulations become increasingly important from the FLMs perspective. We are pleased to see ADEM's commitment to completing the reasonable progress reports every five years, as well as comprehensive SIP revisions in subsequent planning periods, in accordance with the Regional Haze Regulations.

We are also pleased to see that ADEM has included measures for ongoing consultation with the FLMs on page 85 and included annual discussions of the implementation process and the most recent IMPROVE monitoring data. We recommend adding the following sentence to clearly define "ongoing consultation" for future planning periods. *"Consultation between ADEM and the FLMs will include early involvement of FLMs in the periodic review process and FLMs will receive copies of revised regional haze SIPs for comment prior to finalization."* We feel that clearly establishing the process for FLM consultation in the SIP document may eliminate any confusion as to what "ongoing consultation" requires in future years.