



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 6

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DALLAS, TX 75202-2733

Mr. Eddie Terrill  
Director, Air Quality Division  
Oklahoma Department of Environmental Quality  
P.O. Box 1677  
Oklahoma City, OK 73101-1677

Dear Mr. Terrill,

Thank you for the opportunity to comment on the draft revision of the Oklahoma Regional Haze State Implementation Plan (SIP). I appreciate the tremendous effort that has gone into the preparation of this document. My staff has reviewed the SIP and our comments are enclosed. We stand ready to assist the Oklahoma Department of Environmental Quality as you prepare the final document.

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,

*Guy Donaldson for*

Guy Donaldson  
Chief  
Air Planning Section

Enclosure:

EPA Region 6 Comments on the Oklahoma Draft Regional Haze SIP  
12/15/09

1. EPA Region 6 has submitted these comments on the Oklahoma 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, 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. Although on page 68, ODEQ states that Appendix V, Section 2.1(b) through (h), are included in Appendix 6-1, it does not appear that is the case. ODEQ should ensure, with the submittal of the final SIP, it demonstrates it has followed the requirements of Appendix V to Part 51.
3. On page 35, ODEQ states that for the purposes of calculating natural conditions, it considered all organic carbonaceous particulate, coarse matter, and fine soils as natural and all sulfurous, nitrate, and elemental carbon particulate as anthropogenic. This assumption ignores fine soil contribution from agricultural practices, such as wind-blown dust from tilled fields. Historically, this has been a significant source of fine soil. On page 32, ODEQ expands this discussion as it relates to fire, stating it assumed an overwhelming majority of organic aerosols originate from natural sources or fires. It is unclear whether this assumption ignores organic carbonaceous contributions from non-natural sources, such as agricultural fires and fires used to clear rangeland. Because of the economic component associated with these fires, it is unclear how they can be considered natural. Consequently, Region 6 feels these assumptions have not been adequately justified. Also, these assumptions impact the requirement in 40 CFR 51.308(d)(3)(iv), which requires ODEQ identify all anthropogenic sources of visibility impairment considered by it in developing its LTS, including consideration of major and minor stationary sources, mobile sources, and area sources. On page 104, ODEQ states "Despite their prominence in the emissions inventory, agricultural burning and wildfires in Oklahoma do not contribute significantly to regional haze at the Wichita Mountains nor at any other Class I area." However, Region 6 notes that according to Tables IV-1, IV-2, and IV-8, fire emissions account for approximately 33% of Oklahoma's PM 2.5 emissions inventory with agricultural burning itself accounting for approximately 23%. It would therefore appear that anthropogenic sources of biomass burning emissions are a significant contributor to the state's PM 2.5 emission inventory. Especially when it is considered that much of these emissions usually occur within a few weeks in the spring or summer and are not evenly spread out over the year. Region 6 understands that ODEQ is presently developing a smoke management plan. We view this as very important tool in the control of these emissions and urge ODEQ to work with us in the finalization of this important document.
4. Section 51.308(d)(1)(iv) requires that ODEQ consult with those States which may reasonably be anticipated to cause or contribute to visibility impairment for the Wichita

Mountains. According to Tables V-1-V-6, and as noted on page 66, Texas accounts for more sulfurous, nitrate, organic carbonaceous, elemental carbonaceous, and fine soil particulate sources of light extinction to the Wichita Mountains than do those source in Oklahoma, and is right behind Oklahoma in coarse particulate. Table V-8 also indicated the sulfurous sources from Louisiana and Indiana also account for more light extinction than do the sulfurous sources in Oklahoma. Appendix 10-1 contains several consultation letters between ODEQ and neighboring States regarding ODEQ's consultation efforts. However, despite the obvious contribution from Texas sources to the visibility degradation to the Wichita Mountains, it does not appear that ODEQ actually requested reductions from specific sources within Texas – only that it be consulted on BACT analyses for sources within 300 kilometers from the Wichita Mountains. We urge Oklahoma insure that Texas is aware its sources impacts and encourage reductions as necessary.

5. ODEQ should include in Section X and in Appendix 10-1 the details concerning its consultation with Louisiana, or discuss why it did not feel sources in Louisiana are not reasonably anticipated to cause or contribute to visibility impairment at Wichita Mountains, in fulfillment of Section 51.309(D)(1)(iv).
6. On page 69, ODEQ discusses how it identified which sources were BART-eligible, stating, "DEQ reviewed its emissions inventory and followed the steps listed in Subsection II.A of Appendix Y to 40 C.F.R. Part 51 to derive a list of BART-eligible sources." However, no other information was located that describes the steps ODEQ took to make this determination. ODEQ should expand this discussion, making particular reference to information sources (e.g., permit databases, surveys, etc.) and how it ensured all BART-eligible sources were identified.
7. On page 71, Table VI-3 lists BART-eligible sources that were granted waivers from BART via proposed permitted emission limits. The actual waivers in Appendix 6-3, all contain essentially the same language:

"The active Title V permit will now be modified to include requirements that the facility comply with the proposed changes/limits in the application within five years of the Regional Haze SIP approval by EPA. Also to be included, will be a requirement that the facility modify the operating permit to incorporate the proposed method of compliance with Appendix Y to Part 51, V. Enforceable Limits. The operating permit shall be modified no later than 6 months prior to the SIP approval."

Regarding this, ODEQ should address the following:

- a) No information was provided that indicates what controls or practices would be necessary to comply with these new permit limits. ODEQ should ensure that if compliance is via relatively uncomplicated work practices or operational modifications that can be done in a relatively short period of time, the full five years is not granted. This is necessary in order to comply with

51.308(e)(1)(iv), which requires "each source subject to BART be required to install and operate BART as expeditiously as practicable, but in no event later than 5 years after approval of the implementation plan revision."

- b) ODEQ should provide all modeling and technical evaluations necessary to document the amount of reductions necessary for these facilities to fall under the BART threshold of 0.5 dv.
- c) On page 71, ODEQ makes the following statement regarding these facilities and BART enforcement:

"DEQ will issue enforceable Part 70 air quality permits requiring BART-eligible sources subject to BART to: (1) install BART and achieve the associated BART emission standards; or (2) "achieve greater reasonable progress toward natural visibility conditions" through an approvable alternative as provided for in 40 CFR § 51.308(e). Subject sources must achieve the BART emission standards referenced above or achieve the "greater reasonable progress" referenced above within seven (7) years from the date of submission of the Oklahoma Regional Haze SIP or within five (5) years of EPA's approval of the SIP, whichever is longer."

Regarding this, the following comments apply:

- i) Any future alternative to BART, as contemplated under 40 CFR 51.308(e)(2), would require a SIP modification.
  - ii) Region 6 suggests the language "achieve greater reasonable progress," which is apparently offered as an alternative to the BART emission limits proposed in the SIP, be dropped to avoid confusion with the reasonable progress requirement of 51.308. If a permit condition results in less SO<sub>2</sub>, NO<sub>x</sub>, or PM control than was provided for in the SIP, it would require a SIP modification.
  - iii) A schedule of compliance with BART that provides for the operation of BART controls later than five years from EPA's approval of the SIP would not be in compliance with 51.308(e)(1)(iv). Note similar language is on page 79.
  - iv) The above comment concerning the review of the modeling notwithstanding, ODEQ should understand that Region 6 will not be able to approve the Oklahoma regional haze SIP until we are assured there is an adequate enforcement mechanism in the SIP to ensure these sources are no longer subject to BART.
8. ODEQ should discuss why the BART NO<sub>x</sub> limit for the AEP/PSO Southwestern power station unit 3 is 0.45 lbs/MMBtu, and not a lower value. It appears from an examination of EPA's CAMD database, that the historical annual NO<sub>x</sub> emission rates from this facility for each year from 2000 – 2008 (except for 2008), are already lower than the proposed controlled BART rate, even considering the BART rate is a 30 day average.

9. ODEQ should discuss why the AEP/PSO Northeastern power station units 3 and 4, should not have a lower proposed BART SO<sub>2</sub> limit than the presumptive limit of 0.15 lbs/MMBtu.
10. On page 76, ODEQ discusses additional information received for the OG&E Sooner and Muskogee coal fired EGUs. OG&E increased its cost effectiveness calculations for Dry FGD-SDA to a range of \$9,625 to \$10,843 per ton of SO<sub>2</sub> removed and to a range of \$10,271 to \$11,490 per ton of SO<sub>2</sub> removed for Wet FGD. Region 6 has reviewed the information that was provided for public review. Based on cost estimates we have for other similar units, we feel these cost are significantly inflated. We question the assumptions in cost that have been made in general and the cost assumptions for annual operating costs, including administrative costs, which are significantly out of proportion with other cost analyses for similar control installations. Region 6 understands the data to support this cost estimate has been identified by the source as proprietary in nature. EPA Administrator Jackson's priorities for regulatory decisions are they be transparent and meet the requirements of the law. Therefore, these principles of transparency and rule of law are one's Region 6 wants to ensure are met in this process. Therefore, we cannot base a decision regarding BART on data that is not available for public review. Because of the projected visibility benefits to multiple Class I areas that would result from the control of SO<sub>2</sub> emissions at these facilities, the lack of support for OG&E's figures, and our feeling the true installed costs of these controls are much lower, Region 6 would likely not be able to approve the Oklahoma regional haze SIP without these controls. We note that the U.S. Fish and Wildlife have provided more detailed comments on the OG&E and PSO BART analyses. We share many of the concerns that they raised, but did not think it necessary to be as detailed in this comment letter.
11. One of the items that is briefly mentioned is that for some BART-eligible sources, no BART reductions were assumed in the Regional Modeling. It would be helpful to have a table summarizing for each BART-eligible source, what emission rates were assumed in the RH modeling. An additional table indicating if the source was subject to BART, or was able to model out of BART and/or include the final emission rates that are being made federally enforceable (either through permitting, or other methods). While the zero-out modeling bounds the impact, it would helpful to have a summary of additional emission rate changes that have not been take into account in the RH modeling analysis.
12. Within the body of the text in its reasonable progress section, beginning on page 96, ODEQ should provide references for the data contained in all the tables and figures (e.g., Table IX-1 Figure IX-1) that direct the reader to where the data can be found.
13. On page 99, ODEQ presents data in Table IX-3, that essentially shows the difference between its Reasonable Progress Goal (RPG) and the Uniform Rate of Progress (URP) is approximately equal to the visibility impact from sources outside of Oklahoma. Regarding this, ODEQ makes the statement: "The model-extracted data in Table IX-3 suggest that even complete elimination of all anthropogenic emissions in Oklahoma likely would fail to meet this uniform rate of progress." This zero-out run of Oklahoma's

emissions assumes no additional changes in upwind states. This is not a realistic assumption and it does bias the conclusion that removal of all Oklahoma sources would still likely fail to meet the uniform rate of progress goals. Further reductions in upwind states in addition to local measures could yield a result meeting the uniform rate of progress goal.

14. Region 6 was unable to locate ODEQ's response to the requirements contained in Sections 51.308(d)(1)(vi) and 51.308(d)(3)(v)(G).
15. Section 51.308(f) requires that ODEQ revise and submit its regional haze implementation plan revision to EPA by July 31, 2018 and every ten years thereafter. In response to this, ODEQ states on page 111, "DEQ awaits approval of this implementation plan before submitting any such revisions." ODEQ should clarify that it will comply with this requirement.
16. Section 51.308(d)(4)(v) requires that ODEQ 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. The ODEQ has supplied an inventory for the baseline year, and for 2018. EPA understands that the ODEQ 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 169B(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 the ODEQ 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.

17. In the modeling section, it would be helpful to note where the modeling files (RH and BART) can be accessed. Inclusion of a printout (or screenshots) of the list of documents available on the CENRAP and ODEQ websites and/or ftp sites that are being relied upon in the SIP would make a good attachment to the SIP narrative.