SUMMARY OF COMMENTS AND STAFF RESPONSES FOR PROPOSED REVISION TO THE OKLAHOMA REGIONAL HAZE STATE IMPLEMENTATION PLAN

COMMENTS RECEIVED PRIOR TO AND AT THE DECEMBER 16, 2009 PUBLIC HEARING

Written Comments

U. S. Environmental Protection Agency, Region 6 (EPA) in a letter dated December 15, 2009, signed by Carrie Paige for Guy Donaldson, Chief, Air Planning Section

1. **COMMENT:** 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.

   RESPONSE: DEQ has added the required administrative materials.

2. **COMMENT:** 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 sulfureous, 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.

   RESPONSE: It appears that EPA **may** misunderstand the purpose of this consideration. This consideration applied to "pseudo-natural" conditions, where the prefix "pseudo-" means false, deceptive, and sham. DEQ included these pseudo-natural conditions to highlight the three categories of particulate for which DEQ possesses enough evidence to attempt to regulate in this implementation plan revision. DEQ included this calculation to enlighten the reader regarding the efficacy of a strategy designed to reduce emissions contributing to these three categories of other particulate matter.

   DEQ concurs with EPA regarding the accounting of this contribution but finds this contribution relatively small and impossible to isolate at the Wichita Mountains. DEQ will address these sources in comprehensive periodic revisions to this implementation plan under 40 CFR § 51.308(f).

3. **COMMENT:** 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.

   RESPONSE: The final paragraph in Section III.A.3 has been deleted in its entirety.

4. **COMMENT:** 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.

RESPONSE: DEQ identifies all sources of emissions that degrade visibility in Section IV, which reinforces the assumptions concerned. DEQ considered all anthropogenic sources in developing the long-term strategy. DEQ will not control fires and various other sources as part of this implementation plan revision for various reasons, including their relatively small contribution to total visibility impairment and the administrative difficulty associated with such controls.

5. **COMMENT:** 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.

RESPONSE: DEQ presumed that most particulate matter emitted from fires primarily takes the forms of organic and elemental carbonaceous particulate. Measurements of these components of visibility impairment at the Wichita Mountains do not indicate that these components of particulate matter predominate on many days without prescribed burning on the Wildlife Refuge or catastrophic fires in the vicinity.

Table IV-1 does not disaggregate fire emissions from any emissions category. Table IV-2 lists all emissions from fire area sources, totaled according to category. The cited statistics come only from Table IV-8, which Environmental Protection Agency slightly misinterprets. Extensive burning in the Flint Hills region of Kansas and Oklahoma generally occurs during periods of southerly flow near the surface, and few Class I areas lie downwind of these fires. Agricultural grass fires alone account for 23% of direct $PM_{2.5}$ emissions. The "all other" fire area sources classification in the table includes various other agricultural fires.

Despite the large proportion of directly emitted $PM_{2.5}$ attributed to fires, DEQ does not believe that smoke from these fires contributes significantly to regional haze at the Wichita Mountains on the overwhelming majority of days. DEQ uses the Interagency Monitoring of Protected Visual Environments (IMPROVE) protocol to measure regional haze in accordance with 40 CFR § 51.308(d)(4). This monitoring technique does not consider smoke plumes aloft as regional haze or any other form of visibility impairment in contrast to the definition of visibility impairment in 42 USC § 7491(g)(6). DEQ follows the EPA's lead in not addressing atmospheric discoloration from smoke plumes aloft under as visibility impairment presently. Numerous pollutants emitted as gases not directly emitted as $PM_{2.5}$ convert to particles in the atmosphere, also contributing to regional haze. Anthropogenic sources other than fires emit a considerable majority of these gases.

Fires generally occur on days with atmospheric conditions that limit smoke spreading at the surface. Most smoke usually forms plumes aloft and generally travels above monitoring equipment. Easily identifiable smoke reached the Wichita Mountains in any considerable quantity on only a few monitored days. These events included known burning on the Wichita Mountains Wildlife Refuge and catastrophic fire.

6. **COMMENT:** 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.

   RESPONSE: DEQ will work with EPA as it develops the smoke management plan.

7. **COMMENT:** 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.

   RESPONSE: DEQ's consultations with Texas are accurately documented in this SIP revision and information provided during those consultations clearly indicate Texas sources contribute significantly to visibility impairment at the Wichita Mountains.

8. **COMMENT:** 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).

   RESPONSE: DEQ's consultations with Louisiana are accurately documented in this SIP revision and information provided during those consultations clearly indicated the contributions from Louisiana sources to visibility impairment at the Wichita Mountains.

9. **COMMENT:** 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.

   RESPONSE: Additional information has been added to the BART chapter.

10. 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) **COMMENT:** 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."

RESPONSE: Additional information has been added on the BART waivers based on new emission limits. As previously indicated in the SIP, the Part 70 (Title V) permit for each of these facilities has or will be modified to include requirements necessary to qualify for the waiver from BART. The modified permit and/or accompanying evaluation memo as appropriate will specify the new permit limits, any controls or practices necessary to meet the limits, and timelines for implementation. For changes that entail a "major modification" of the Part 70 permit, the normal opportunity for EPA and public review of and comment on these permit changes will be provided. DEQ anticipates that each of these permits will be modified "…no later than 6 months prior to the SIP approval" as stated in the waivers.

b) **COMMENT:** 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.

RESPONSE: All modeling and technical evaluations documenting these reductions are in the applications and will be included DEQ's evaluation memo for the Part 70 permit modification. This information has been provided to EPA and the FLMs, and is available for review online and/or in DEQ files. DEQ believes that including copies of all of these files in the SIP submittal is unnecessary, considering the documentation currently provided in the SIP and the status of these facilities.

11. 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:

a. **COMMENT:** Any future alternative to BART, as contemplated under 40 CFR 51.308(e)(2), would require a SIP modification.

RESPONSE: The final BART Determinations and the SIP revisions spell out BART with, where applicable, corresponding Contingent SO_2 BART Determinations and Greater Reasonable Progress Alternative Determinations. As a result, the referenced language has been modified. DEQ acknowledges that a SIP modification would be required for any BART changes or alternatives following EPA's approval of this SIP Revision.

b. **COMMENT:** 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 SO2, NOx, or PM control than was provided for in the SIP, it would require a SIP modification.

RESPONSE: Although the specific language referenced by EPA's comment has been modified in the updated SIP Revision, DEQ believes that it has correctly applied the "greater reasonable progress" phrase as it is used in 40 CFR § 51.308(e)(2). *See also previous response.*

c. **COMMENT:** 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.

RESPONSE: The specific language referenced by EPA's comment has been modified in the updated SIP Revision, and the revised BART Determinations specify appropriate timelines.

d. **COMMENT:** The above comment concerning the review of the modeling not withstanding, 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.

RESPONSE: DEQ is confident that the Part 70 permit modifications (in the context of the Part 70 Program), as referenced in the SIP, will constitute an adequate enforcement mechanism. In addition, Appendix 6-5 contains enforceable Regional Haze Agreements that cover certain BART-subject facilities.

12. **COMMENT:** ODEQ should discuss why the BART NOx 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 NOx 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.

RESPONSE: PSO is required to establish final emission limits for the BART source in the construction and operating permits. For the purposes of this evaluation AEP-PSO was unable to obtain lower guarantees from vendors for these specific boilers. DEQ would agree that average annual emissions should ultimately be lower than these conservative estimates.

13. **COMMENT:** ODEQ should discuss why the AEP/PSO Northeastern power station units 3 and 4, should not have a lower proposed BART SO2 limit than the presumptive limit of 0.15 lbs/MMBtu.

RESPONSE: After considering the comments including cost received, the portion of the Regional Haze SIP and/or attached BART determination(s) relevant to the above comment(s) has been modified or removed. Consequently, the above comment has been addressed and/or is no longer applicable.

14. **COMMENT:** 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 SO2 removed and to a range of $10,271 to $11,490 per ton of SO2 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 ones 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 SO2 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.

RESPONSE: OG&E provided comments at the public hearing in response to this concern. OG&E has also supplemented its BART-related applications for Part 70 permit modifications with additional data. The documents have been provided on the DEQ website and submitted directly to Region 6. ODEQ agrees that the original cost calculations were inflated. The final BART determinations are based on the more accurate revised estimates.

15. **COMMENT:** 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.

RESPONSE: A preliminary draft table reflecting the emissions of BART-subject units used in the Regional Haze modeling has been assembled. Adding data to the table to reflect the emissions of BART eligible units used in the Regional Haze modeling would be an additional significant task. DEQ recognizes that the emissions resulting from the BART Determinations differ significantly from modeled emissions, and without additional analysis such a table would not be particularly relevant. Therefore, time restraints preclude including such a table in the BART chapter at this time. Further, emissions used in modeling reflect projected actual emissions rather than permitted potential emissions. Such comparisons, absent an understanding of facility operations, are of limited use.

16. **COMMENT:** 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).

RESPONSE: This information is available in our SIP.

17. **COMMENT:** 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.

RESPONSE: While such a table would be interesting, time restraints preclude developing an alternative inventory and necessary cross references for a true comparison.

18. **COMMENT:** 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.

RESPONSE: In Table IX-1 and Figure IX-1, the implementation plan revision earlier defines and discusses the observations, baseline visibility impairment, and natural visibility conditions. The reasonable progress goal for 2018 derives from Community Multi-scale Air Quality modeling from CENRAP as described in Chapter VIII of this implementation plan revision. DEQ staff extrapolated the remaining quantities from the reasonable progress goal for 2018.

19. **COMMENT:** 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.

RESPONSE: Table IX-3 shows the reasonable progress goal and the uniform rate of progress at the Wichita Mountains and the difference in visibility impairment between these rates in 2018. The visibility impairment attributable to sources outside Oklahoma, however, considerably

exceeds the difference between these rates, whereas this difference likely slightly exceeds the visibility impairment attributable only to anthropogenic sources only within Oklahoma.

DEQ did not engage in "zero-out modeling" to make this determination. The comparison between the contribution of all anthropogenic sources in Oklahoma to visibility impairment at the Wichita Mountains and the difference between the uniform rate of progress and the reasonable progress goal comes instead from particulate source apportionment modeling. The particulate source apportionment modeling assumes that upwind states will not require controls that they do consider unreasonable.

In establishing the reasonable progress goal at the Wichita Mountains under 40 CFR § 51.308(d)(1)(i)(B), DEQ considered the emission reduction measures needed to achieve the uniform rate of improvement in visibility before 2018. In this statement, DEQ considered only emissions sources under its territorial jurisdiction. Removal of all sources in Oklahoma likely would fail to meet the uniform rate of progress.

For the reasons described in the implementation plan revision, DEQ does not consider the uniform rate of progress at the Wichita Mountains as an achievable goal. DEQ recognizes that reductions in emissions in Texas and in other upwind states and foreign countries might lead to reductions in visibility impairment beyond the reasonable progress goal. Reductions in emissions to attain the ambient air quality standard for ozone (O_3) may contribute to these reductions; however, DEQ cannot anticipate the ancillary benefit of these emissions reductions on visibility impairment at the Wichita Mountains, especially without knowing specifically which emissions reductions those authorities will implement.

20. **COMMENT:** 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).

RESPONSE: The first regulation, 40 CFR § 51.308(d)(1)(vi), forbids DEQ from adopting a reasonable progress goal at the Wichita Mountains that represents less visibility improvement than that which DEQ expects to result from implementation of other requirements of the federal Clean Air Act before 2018. CENRAP and DEQ worked together to predict the results of implementation of BART and of other requirements of the Clean Air Act and used these predictions to estimate an emissions inventory for 2018. Chapter VII lists several important measures under the federal Clean Air Act, and Chapter VIII discusses the process of estimating emissions inventory for 2018 and the modeling of regional haze under these emissions inventories. DEQ expects the implementation of various requirements of the federal Clean Air Act (and regulations promulgated thereunder) to result in the improvement in visibility that this modeling indicates. DEQ acknowledges that various interpretations of and regulations under the federal Clean Air Act may result in lower emissions than those which CENRAP and DEQ estimated for 2018. DEQ also recognizes that social and cultural trends, especially considering the continued rapid population growth in the sovereign state of Texas, may result in countervailing increases in emissions not anticipated in CENRAP modeling. DEQ nevertheless considers the CENRAP modeling to inform a "best guess" of the emissions in 2018 under all provisions of the federal Clean Air Act and set its reasonable progress goal accordingly. The requirements of 40 CFR 51.308(d)(3)(v)(G) are addressed in Chapter VIII. This regulation requires DEQ to consider the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions before 2018 in developing its long-term strategy. The

long-term strategy ideally would diminish point, area, and mobile source emissions before 2018. As adopted hereunder, the long-term strategy of DEQ at least constrains point-source emissions. DEQ included this assessment in Chapter VIII, but iterations in modeling in conjunction with CENRAP allowed for the use of results from preliminary simulations of future emissions in formulating the long-term strategy in Chapter VII and reasonable progress goals in Chapter IX.

21. **COMMENT:** 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.

RESPONSE: DEQ understands that next SIP revision is to be submitted to EPA by 31 July 2018 and has the deleted the sentence.

22. **COMMENT:** 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 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 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.

RESPONSE: It is correct that 2005 emissions inventory is the most recent complete inventory. This inventory is available to the public via EPA's website athttp://www.epa.gov/ttn/chief/eiinformation.html. A statement to that effect has been added to the Emission Inventory Chapter. DEQ is not aware that an analysis of this inventory is

required, and there is insufficient time to accomplish this while meeting the deadline for submitting this SIP revision.

23. **COMMENT:** 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.

RESPONSE: DEQ concurs that these additions could in some ways improve the content of this SIP; however, due in part to time restraints, DEQ has decided not to make the suggested changes.

DEQ received numerous written and oral comments from the public concerning the implementation of BART and the BART determinations included in the draft Regional Haze SIP revision. After considering the comments received, applicable portions of the Regional Haze SIP and/or attached BART determination(s) relevant to those comment(s) has been modified or removed. Consequently, except where a specific response was needed, the following comments have been addressed and/or are no longer applicable. The written submittals are included in Appendix 10-1.

OG&E – Mr. Kimber Shoops provided a written statement to duplicate his oral comments. In addition, OG&E provided many written comments which are included in a separate appendix.

Devon Energy submitted a letter December 16, 2009, signed by William F. Whitsitt, Executive Vice President of Public Affairs

Sierra Club, Oklahoma Chapter submitted a paper dated December 13, 2009, received by DEQ on December 16, 2009, signed by Bud Scott, Government Affairs Director

Chesapeake Energy Corporation submitted a paper dated December 16, 2009, received by DEQ on same day, which duplicates oral comments presented by Mr. Don Shandy.

Public Service Company of Oklahoma (PSO) submitted a letter dated December 16, 2009, received by DEQ on same day, signed by Howard L. Ground, Manager of Government Affairs.

24. **COMMENT:** Table VIII-2 projects an annual TPY increase of 32.86% in the state's Ammonia emissions inventory from the 2002 year. As previously stated, AEP/PSO requests the ODEQ to consider the complementary role of Ammonia in visibility impairing particulate formation. AEP/PSO sees the need for the ODEQ to address Ammonia control (in the near term) as also to cap Ammonia emission for meaningful visibility reduction in the near term and into the future.

RESPONSE: Public Service Company of Oklahoma correctly interprets a cell in the referenced table in the implementation plan revision. This statistic derives from projected inventories used in CENRAP modeling. DEQ will reevaluate ammonia emissions in preparation for any comprehensive periodic revision under 40 CFR 51.308(f).

DEQ considered the complementary role of ammonia in forming visibility-impairing particulate in assessing the particulate observations and in developing an emissions inventory. Following the leadership of EPA, DEQ does not consider regulation or reduction of ammonia emissions as a strategy to reduce particulate matter concentrations in this implementation plan revision. DEQ nevertheless requires permitted point sources, excluding animals in agricultural production, to report ammonia emissions.

DEQ currently does not regulate agricultural sources and consequently does not control most ammonia sources.

Western Farmers' Electric Cooperative – In a letter received by DEQ on December 16, 2009, signed by Gerald Butcher.

25. **COMMENT:** The DEQ has determined the impact of out-of-state emissions (primarily from the State of Texas) on visibility in the WIMO are significant. Conversely, Texas recently submitted its Regional Haze SIP Revision to EPA and therein indicated emissions originating from Texas do not impact visibility in the WIMO. Therefore, there appears to be a significant disagreement between the findings from each State. How does the DEQ propose to resolve this issue?

RESPONSE: DEQ stands by its assessment that Texas emissions significantly impair visibility at the Wichita Mountains. EPA can evaluate both SIPs and will be ultimately responsible for determining which findings are supported by the technical demonstrations included in each SIP.

26. **COMMENT:** Did the DEQ advise Texas that additional emission reductions from Texas sources would not be needed to help Oklahoma meet the WIMO reasonable progress goals, and if so, on what basis was such determination made?

RESPONSE: DEQ advised Texas of its finding during the consultation process that Oklahoma would be unable to meet the uniform rate of progress without additional reductions, including those from Texas sources. However, DEQ does not have the regulatory authority require emissions reductions in other states. Only Texas and EPA can require those reductions.

27. **COMMENT:** … Based on the above and the fact that "… even the elimination of all anthropogenic sources within Oklahoma is not sufficient to comply with uniform rate of progress", the DEQ concluded "any effective strategy for managing visibility impairment at the Wichita Mountains must address outside sources including regional and international transport." However, the Revision is silent as to how such outside sources will be addressed.

RESPONSE: See response to previous comment.

Oral Comments Received at the December 16, 2009 Public Hearing

Joe Kordzi (EPA, Region 6)

COMMENT: I would like to urge the Air Quality Council and Environmental Quality Board to adopt the Oklahoma Regional Haze Plan. It is the opinion of EPA Region 6 that the measures contained within Oklahoma's regional haze plan will do much to improve visibility at the Wichita Mountains, with co-benefits to DEQ's other air quality programs. Furthermore, it is vitally important this plan be submitted to us for review as soon as possible. EPA Region 6 has submitted written comments of the plan that we request be entered into the record.

Paul Renfrow (OGE Energy Corp)

COMMENT: We disagree with and oppose the draft proposal for several reasons: First and most importantly, the proposal will result in the largest single rate increase for our customers in the company's 108 year history. This cannot be minimized nor is it contrived. The proposal forces us to spend more than ONE Billion DOLLARS of customer's money to add pollution control devices, commonly called scrubbers, to our coal plants. Those coal plants are each between 25-30 years old and somewhere in the last half of their planned useful lives. This proposal will actually PROLONG the life of the coal plants when it seems everyone in the country wants utilities to quit using coal. This proposal is completely contrary to the national efforts to reduce CO2 emissions. While the Regional Haze rule has the desirable intention of making our wilderness areas more beautiful over the next 50 years, this is, frankly, an inefficient, contradictory compliance exercise that ignores innovative or creative approaches. We strongly recommend that the OG&E alternative plan be adopted **b**y the DEQ and included in their final State Implementation plan to be filed with the EPA.

Kimber Shoop (OG & E)

COMMENT: OG&E believes that anyway you look at it, scrubbers are not cost effective. : That is why we developed our alternative proposal. OG&E strongly urges the State of Oklahoma to instead consider the alternative proposal submitted by OG&E on September 23, 2009 to achieve compliance with regional haze targets for these four units. OG&E's alternative proposal will ultimately achieve the same visibility improvement as set forth in the Revised SIP, but in a cost effective manner through the use of more natural gas-fired and wind generation to meet the electric needs of our customers.

Don Shandy (Chesapeake Energy Corporation)

COMMENT: Rather than requiring huge capital investment to the Oklahoma coal-fired units that are more than 30 years old, such units should either convert to natural gas firing systems or be replaced with new natural gas fired generation units. Oklahoma must begin to effectively address emissions from coal-fired electric generation plants in Texas. … And these sources need to be evaluated with the same level of scrutiny that sources inside Oklahoma are being evaluated. While the Plan acknowledges impact from out-of-state sources and to some extent, attempts to address this matter via consultation with Texas, and if we attempt to address this in consultation with Texas and we have an agreement, according to the document, to allow Oklahoma the opportunity to comment on pending Texas air permits - permit application for sources within 300 kilometers of our border, we believe this approach is inadequate. This is particularly the case given DEQ is requiring again or mentioning excessive and expensive sulfur emission control on coal-fired electric generation units located inside the state of Oklahoma. Chesapeake's comment is that in light of overwhelming evidence that Texas sources impact visibility at the Wichita Mountains, and given the potentially large financial impact on Oklahoma electric generation facilities and rate payers, DEQ should have requested additional reduction from Texas sources to meet the reasonable progress goal. While Chesapeake acknowledges that scrubber technology would result in significant reductions of sulfur emissions, which will accomplish – such will be accomplished only again after an extraordinary and

unwarranted investment by rate payers in this state. …And it would represent one of the largest capital investments in Oklahoma history. While we definitely agree that we've got to make movement to protect the Class I area, there has to be a very hard look at these numbers. Chesapeake believes that the expenditure of funds for this type of emission control equipment is imprudent. While it would undoubtedly be acceptable to DEQ, the culpable coal-fired generation sources should focus on the development and utilization of more environmentally friendly electric generation units and fuels.

Bud Scott (Sierra Club)

COMMENT: I have submitted formal comments as well that should be entered into the record. One of our major issues with the draft SIP today first lies with the exclusion for most of the analysis of the Class I areas that are impacted outside of the state of Oklahoma, primarily Caney Creek and the Upper Buffalo Area. Those two we would request be given the same level of analysis as the Wichita Mountain Wilderness Refuge. The second of addressing out-of-state issues primarily with the state of Texas. Those have already been addressed by parties at Chesapeake and Oklahoma Gas and Electric. That's one of our most important points is that we could be given alternative approaches which were very little addressed through the SIP for dealing with the out-of-state issues on transport, the out-of-state issues with direct emissions, and its impact on the Wichita Mountain Wilderness Area. Number two, we've identified in the alternative approaches for implementation of the BART and BACT that in the alternative approaches we look more towards fuel switching provisions which were not adequately addressed in the provided SIP. Most of the SIP addressed the direct implementation of BART and then somewhat in BACT. And we would just like to see more of that approached and given a little more detail. And then finally, we would really just like to see more cooperation on the interstate level. So ultimately the sierra Club while we do generally support the implementation of the Best Available Retrofit Technologies and Best Available Control Technologies at the same time we feel like the plan here in Oklahoma could be revised to address some of the alternatives available that will be best for the rate payers in Oklahoma, the citizens of Oklahoma, and for our natural resources.

Darryl Smeete (Devon Energy)

COMMENT: We're here to support OG&E's application for an alternative proposal to the Regional Haze Plan. In short what OG&E is saying is that it not only is more economical but we have less greenhouse gas emissions by converting some of the base load generating capacity go gas fueled rather than coal fueled. We think the proposal by OG&E is a win-win. First of all it reduces emissions. Second of all it puts people to work, drilling and completing wells. Once those wells are on stream and produces gas and that gas with subsequent productions tax. That tax goes to the State of Oklahoma and to the other states where it is produced.