



File Code: 2500
Date:

Ms. Margaret Earnest
Air Quality Division, Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Dear Ms. Earnest:

On October 23, 2020, the Texas Commission on Environmental Quality (TCEQ) submitted a draft Regional Haze State Implementation Plan describing your proposal to continue improving air quality by reducing regional haze impacts at mandatory Class I areas across your region. We appreciate the opportunity to work closely with your 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 areas.

This letter acknowledges that the U.S. Department of Agriculture, U.S. Forest Service, has received and conducted a substantive review of your proposed Regional Haze State Implementation Plan. This review satisfies your requirements under the federal regulations 40 C.F.R. § 51.308(i)(2). 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 can approve the document.

We have attached comments to this letter based on our review. We look forward to your response required by 40 C.F.R. § 51.308(i)(3). For further information, please contact Chuck Sams, at 404-347-4083 or via email at charles.sams@usda.gov or Bret Anderson (bret.a.anderson@usda.gov).



Again, we appreciate the opportunity to work closely with the Texas Commission on Environmental Quality.

Sincerely,



TROY D. HEITHECKER
Forest Supervisor
Ouachita National Forest



LORI WOOD
Forest Supervisor
Ozark-St. Francis National Forests
cc: Charles Sams, Margrett Boley, Sherri K. Schwenke, Eddie Taylor

Enclosure***USDA Forest Service Technical Comments on Texas Commission on Environmental Quality (TCEQ) Draft Regional Haze State Implementation Plan (SIP)***

We appreciate the opportunity to work with your agency through the initial evaluation, development, and, now, subsequent review of this plan. Below are items that are of concern to the USDA Forest Service and we request additional consultation with TCEQ staff on these issues before final adoption of the Texas SIP.

The selection of parameters for costing and sensitivity analysis not consistent with guidance:

The TCEQ screening analysis applied sulfate and nitrate weighted residence time with emissions over distance (Q/d) to select a list of 18 sources for four-factor analysis. A cost threshold of \$5,000 per ton for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions reduced was used to further refine source selection. The four-factor analysis identified potential additional emission controls for the sources with total annualized control costs over \$200 million.

TCEQ utilized a 10% interest rate along with a 15-year remaining useful life, which maximize implementation costs. EPA guidance recommends the current prime rate (3.25%) with a 20 year or 30 year remaining useful life. Remaining useful life should be determined on a source-by-source basis. The USDA Forest Service evaluated sources using this EPA guidance, as detailed below. We request additional explanation on the differences between TCEQ's methodology and EPA's recommendations on a source-by-source basis.

The USDA Forest Service utilized data provided by the Central States Air Resource Agencies (CenSARA). The ratio of a facilities' emissions (the sum of NO_x and SO₂) and its distance from USDA Forest Service Class I Areas (Q/d), were used to identify facilities for additional controls. Extinction-weighted residence times coupled with a contribution percentage threshold of 1% was further used to refine the facility list. Our recommended list of facilities for four-factor analysis includes the following, which were also included on TCEQ's list:

- AEP Pirkey Power Plant
- Big Brown Steam Electric Station
- Limestone Electric Generation Station
- Martin Lake Electrical Station
- Monticello Steam Electric Station
- Oak Grove Steam Electric Station
- Orange Carbon Black Plant
- Oxbow Calcining
- Sandow Steam Electric Station
- Texarkana Mill
- WA Parish Electric Generating Station
- Welsh Power Plant

Several of these facilities have been identified to be decommissioning or changing fuel source prior to 2028. These include:

- AEP Pirkey Power Plant (decommissioning in 2023)
- Big Brown Steam Electric Station (decommissioned in 2018)
- Monticello Steam Electric Station (decommissioned in 2018)
- Sandow Steam Electric Station (decommissioned in 2018)
- Welsh Power Plant (cease the use of coal by 2028)

WA Parish Electric Generating Station was identified in the Round 1 Regional Haze Federal Implementation Plan for Texas. Oak Grove Steam Electric Station is already controlled and TCEQ concluded that two of the facilities, Orange Carbon Black Plant and Oxbow Calcining, had no available feasible control technologies for the control of NO_x and SO₂ emissions, leaving:

- Limestone Electric Generation Station
- Martin Lake Electrical Station
- Texarkana Mill

Based upon USDA Forest Service analysis, there are multiple combinations of interest rate and remaining useful life where controls can be implemented without surpassing the costing threshold of \$5000 per ton of pollutant removed. The USDA Forest Service recommends that site-specific four-factor analyses be complete using the current bank-prime interest rate and the appropriate useful life for the control equipment unless a source-specific justification is provided, such as lender documentation or federally enforceable shut down date.

Using relative visibility improvement comparisons not consistent with guidance:

A sensitivity analysis of the potential additional controls showed an estimated maximum visibility benefit of 0.56 deciviews at the Caney Creek Wilderness Area in Arkansas. The TCEQ concluded that it is not reasonable to implement new additional measures to improve visibility to a degree that is imperceptible to the human eye at the costs estimated utilizing a 10% interest rate along with a 15-year remaining useful life. Therefore, no new additional emission control measures for the 18 identified sources were included with this SIP revision.

The USDA Forest Service does not agree that it is appropriate to conclude that controls are not reasonable, based upon the analysis provided of visibility benefits estimated for the 20% Most Impaired Days. The maximum visibility improvement modeled by TCEQ was based upon modeling all facilities that satisfy the \$5000/ton threshold implement additional controls. However, as shown above, additional facilities can be controlled cost-effectively and may contribute to additional visibility improvements. A visibility improvement sensitivity analysis that includes additional facilities is recommended.

Reasonable Progress Goals (RPG) modeling using a photochemical model evaluates cumulative impacts from a source, with all other sources also included in the modeling, on visibility for Class I Areas on 20% Most Impaired Days and 20% Clearest Days (days selected from monitoring that is cumulative of all emissions sources impacts at the Class I area). Reasonable

Progress Goal modeling is not to determine the maximum or near maximum impact of a specific source, but the average impact on those best and worst monitored days at a Class I area.

The deciview improvement based on the 2028 background conditions provides an estimate of the amount of benefit that can be anticipated in 2028 and the impact an emission reduction may have on the established RPG for 2028. However, this estimate based on degraded or “dirty” background conditions underestimates the visibility improvement that would be realized for the control options under consideration. Because of the non-linear nature of the deciview metric, as a Class I area becomes more polluted the visibility impairment from an individual source in terms of deciviews becomes geometrically less. Results based solely on a degraded background, will rarely, if ever, demonstrate an appreciable effect on incremental visibility improvement in a given area. Rather than providing for incremental improvements towards the goal of natural visibility, degraded background results will serve to instead maintain those current degraded conditions. Therefore, the visibility benefit estimated based on natural or “clean” conditions is needed to assess the full benefit from potential controls.¹

Previously, EPA has concluded that the cumulative source visibility model employing the current degraded conditions as its baseline was not consistent with the CAA. EPA noted that the use of such a visibility model will rarely if ever demonstrate that emissions reductions at a single source will have an appreciable effect on incremental visibility improvement in a given area. EPA found that rather than restore Class I areas to natural conditions, such a visibility model will serve instead to maintain current degraded conditions.²

Facilities identified to be decommissioning or changing fuel source prior to 2028 should be federally enforceable:

Several facilities have been identified to be decommissioning or changing fuel source prior to 2028 and those changes should be federally enforceable.

- AEP Pirkey Power Plant (decommissioning in 2023)
- Big Brown Steam Electric Station (decommissioned in 2018)
- Monticello Steam Electric Station (decommissioned in 2018)
- Sandow Steam Electric Station (decommissioned in 2018)
- Welsh Power Plant (cease the use of coal by 2028)

Please provide further information confirming the future status of these facilities, and whether emissions reductions are permanent and federally enforceable. Additionally, TCEQ concluded that two facilities, Orange Carbon Black Plant and Oxbow Calcining, had no available feasible control technologies for the control of NO_x and SO₂ emissions. Please also provide further information on that conclusion.

¹ See discussion in Appendix A. EPA’s Visibility Projection Modeling in the Technical Support Document for the Oklahoma and Texas Regional Haze Federal Implementation Plans (Nov 2014) [https://downloads.regulations.gov/EPA-R06-OAR-2016-0611-0073/attachment_4.pdf]

² See <https://cases.justia.com/federal/appellate-courts/ca8/12-1844/12-1844-2013-09-23.pdf?ts=1411154554>, pages 21 and 22, accessed 11/30/2020