



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240



Mike D. McDaniel, Ph.D, Secretary JAN 17 2008
Louisiana Department
of Environmental Quality
602 N. Fifth Street
Baton Rouge, Louisiana 70802

Dear Dr. McDaniel:

On November 21, 2007, the State of Louisiana submitted a draft implementation plan describing its proposal to improve air quality regional haze impacts at mandatory Class I areas across your region. The U.S. Fish and Wildlife Service (FWS) received and has conducted a substantive review of your draft Regional Haze Rule implementation plan, prepared in fulfillment of your requirements under regulations 40 CFR 51.308(i)(2).

We appreciate the opportunity to work closely with the State through the initial evaluation, development, and, now, subsequent review of this plan. Please note that only the Environmental Protection Agency (EPA) can make a final determination regarding the document's completeness and therefore its ability to receive Federal approval from EPA.

As outlined in a letter to each State dated August 1, 2006, our review focused on eight basic content areas, which reflect priorities for the Federal land management agencies. In general, our review of the State of Louisiana's draft plan indicates a need to more completely address the land management agency priorities. However, the FWS Branch of Air Quality staff stands ready to work with you toward resolution of these issues. 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 per section 40 CFR 51.308(I) (3). Specific questions regarding the review of and consultation on the draft plan may be directed to Mr. Tim Allen, FWS Branch of Air Quality, at (303) 914-3802.

Again, we appreciate the opportunity to work closely with the State of Louisiana and compliment you on your hard work and dedication to significant improvement in our nation's air quality values and visibility. 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 all of our most pristine National Parks and Wilderness Areas for future generations.

Sincerely,

Acting

Assistant Secretary for
Fish and Wildlife and Parks

Enclosure

U.S. Fish and Wildlife Service Comments Regarding Louisiana Draft Regional Haze Rule State Implementation Plan

On November 21, 2007, the State of Louisiana submitted a draft Louisiana State Implementation Plan (SIP) Revision for the Regional Haze Program, pursuant to the requirements codified in Federal rule at 40 CFR 51.308(i)(2), to the U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS).

The air program staff of the FWS has conducted a substantive review of the Louisiana draft plan and provides the comments listed below. Our bold face comments described below warrant additional consultation prior to public release of the Louisiana Regional Haze Plan.

We are providing these comments to the State and wish them to be placed in the official public record. We look forward to your response as per section 40 CFR 51.308(i)(3), and we are willing to work with the Louisiana Department of Environmental Quality (LDEQ) staff towards resolving the major issues discussed in this letter. For further information, please contact Tim Allen with FWS at (303) 914-3802.

Overall Comments

The Fish & Wildlife Service has a significant concern that the information provided in the Louisiana SIP Revision for the Regional Haze Program fails to describe or address content elements required by the Regional Haze Rule. In reviewing the Louisiana draft SIP, the FWS has identified four elements that are deficient and in our opinion, does not meet the requirements for an approvable SIP. These elements are:

- **deficient analysis of reasonable progress and long term strategy for regional haze including the absence of an “Area of Influence” (AOI) or sub-RPO evaluation of reasonable control expectations;**
- **inadequate inter-state apportionment and consultation;**
- **deficient information regarding Best Achievable Retrofit Technology¹ (BART); and**
- **omission of established visibility goals, expressed in deciviews, for the 20% worst and 20% best visibility days at the Breton Wilderness Area.**

The State has relied, almost solely, on work completed by a contractor for the CENRAP Regional Planning Organization (RPO). The RPO work is based on regional controls and does not provide state specific progress goals. Louisiana has not adequately evaluated reasonable progress, nor developed a long term strategy specific to the Breton WA. The information supplied by the contractor can be used by Louisiana to develop the State’s opinion and contains useful information that can be used to establish reasonable progress for the Breton WA. However, the information should not replace the State’s obligation to

¹ BART-eligible sources are those sources that have the potential to emit 250 tons or more of a visibility-impairing air pollutant, were put in place or under construction between August 7, 1962 and August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories. Under CAA section 169A(b)(2)(A), BART is required for any BART-eligible source which “emits any air pollutant that may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area.”

evaluate reasonable progress factors and draw its own conclusions regarding reasonable controls.

The location of the Breton WA suggests that several States and Gulf emission sources likely contribute to visibility impairment. Louisiana has not adequately assessed the contribution of neighboring States and Gulf sources to visibility impairment at the Breton WA. An AOI evaluation and source apportionment demonstration is completely lacking and there is no evidence that information has been shared with neighboring States regarding their potential contribution to Breton.

The SIP does not provide enough information that fully describes the steps taken to evaluate BART. In addition, where BART is being established through other programs (i.e. consent decrees), the State must show that the final action results in controls that would be comparable to those achieved through a full BART evaluation.

The remaining comments below are organized according to the priorities that we presented in our August 1, 2006 letter.

Comments:

Baseline, Natural Conditions, and Uniform Rate

1. The plan discusses the issues surrounding the Breton IMPROVE site and the efforts to fill missing data. Recently, CIRA in connection with the IMPROVE committee, updated the basic current and natural conditions calculations using substitute data for stations with missing measurements. The most current results of these calculations are available on the CIRA/VIEWS website. Louisiana did not use these newly revised values and should incorporate them into their Regional Haze Plan.

Emission Inventories

2. Chapter 7 of the draft SIP narrative provides an overview of the emission inventories supporting the plan. However, comprehensive information describing the base year, performance, and future year inventory is not included as part of Chapter 7. Please provide more detailed information with respect to all inventories and the assumptions made with respect to their development. While some inventory information may be found in other portions of the plan, it should also be clearly summarized in the SIP narrative.
3. Table 7.1 and Table 7.2 provide summary emission levels for point, area, non-road, and on-road categories. Please provide more discussion regarding these emission levels. For example, do the numbers included in these tables represent emissions from sources in Louisiana or are they regional estimates?

In addition, it is important to discuss how emissions are projected to change and the consequences of such changes on meeting the State's regional haze goals. For example,

the plan asserts that sulfur emissions are the primary visibility impairing pollutant, yet sulfur emissions associated with point and area sources are projected to increase.

4. The discussion in *Chapter 8: Modeling Assessment*, pertaining to model performance is contradictory and needs further explanation. For example, the plan states that the model performance for sulfate and organic carbon is “good”. However, the model performance specific to Breton WA is described as “mixed” and over predictive of sulfates. This statement is contradicted by *Figure 8.1 Comparison of observed and 2002 Base G modeled daily extinction for Breton Island, Louisiana and Worst 20% days in 2002*. The figure indicates that sulfates are greatly under predicted when compared to Breton monitoring data. The modeling performance assessment should be clearly described, especially with respect to sulfates as they are identified as the primary visibility impairing pollutant of concern.

In addition, Figure 8.1 references the inventory as “typ02g” or 2002 Base G. The performance modeling should be based on the performance inventory, not the base year inventory.

5. Section 8-5 describes the 2018 Base G modeling as including BART controls for Electric Generating Units (EGUs) located in Oklahoma, Arkansas, Kansas, and Nebraska. Please elaborate on what assumptions were made for BART in the 2018 Base G modeling for these states. For example, please specify if a presumptive level, some declared level, or no additional controls were assumed in 2018.
6. *Figure 8.2 URP Glidepath for 20% Worst and Best Days*, provides a graphical illustration of future model predictions versus the Uniform Rate of Progress. Please include a discussion describing “method 1 prediction.” Are Relative Reduction Factors (RRFs) incorporated into these graphs? If RRFs are assumed, please provide a discussion of what these factors are and how they are integrated into glidepath predictions.

Area of Influence

7. The State does not provide information regarding AOI with respect to each Class I area that is influenced by Louisiana sources. The State has access to analyses produced by CENRAP and VISTAS that establish the significant source AOI for Class I areas in and near Louisiana. These geographical AOIs have been established by the RPOs to document the location of sources that have the highest potential to impair visibility at each Class I area. Through use of these AOIs, Louisiana has the opportunity to focus its 4 factor and reasonable progress analyses on the areas with the most significance for regional haze. In addition, all estimates of cost benefit (i.e. dollars per ton) should be based on these influential areas or with individual sources located within these AOIs.
8. The introduction of the plan, Page 1-4, refers to the use of the CALPUFF model in its analysis of Louisiana sources’ impacts on Class I areas located in neighboring states. More detail should be provided with respect to this analysis and the sources that were

modeled, as well as a discussion of the conclusions drawn by Louisiana as a result of this analysis.

Best Available Retrofit Technology

9. On page 9-2, the plan states, “Consistent with the Guidelines, LDEQ did not evaluate emissions of Volatile Organic Compounds (VOCs) and ammonia in BART determinations...” Guidelines do require that the State evaluate ammonia and VOCs for BART. The State should consider either modeling these effects or provide an analysis on why these components are not significant contributors.

Also, *Figure 9.1 CENRAP Modeled 20% Worst Days*, is said to illustrate that VOCs do not contribute significantly to light extinction at the various Class I areas, however VOCs are not included in the figure.

10. Please reconcile the information on page 9-4 with the information presented in *Figure 9.1 CENRAP Modeled 20% Worst Days*. The plan states that there are seven Class I areas that experience a modeled impact over 1.0 deciview from sources located in Louisiana. However, *Figure 9.1* illustrates impacts at various Class I areas in terms of light extinction (Mm^{-1}). Please correlate these units, so that it is clear how Louisiana sources affect the evaluated Class I areas.
11. The BART discussion provided on pages 9-4 and 9-5 is confusing and needs further elaboration. The discussion of BART screening performed by the State seems to be a blend of modeled impacts of 0.5 deciview, development of an “artificial model”, and an analysis of back trajectories. More information is needed to effectively describe methods used by the State in identification of the BART subject sources.

For sources screened using an “artificial model” approach, a comparative analysis should be included to illustrate that the scenarios are “worst case.” The plan needs to describe how the selected emission characteristics represent “worst case” conditions and how these conditions are indicators that sources at further distances will not have a higher impact.

12. The plan includes a list of BART sources, but no final decisions have been expressed. We are including, as attachments to this enclosure, comments specific to the three BART determinations included in Appendix G of the Regional Haze SIP.
13. Both *Figures 9.4 and 9.6* are labeled *Bart Source CALPUFF Screening 2001*. Please clarify and also include a discussion explaining the information presented in *Figure 9.4*, *Figure 9.5*, and *Figure 9.6*.

Reasonable Progress Goals; Long Term Strategy

14. Chapter 10 of the plan describes Louisiana’s reasonable progress goals toward improved visibility. The plan appears to rely entirely on the technical analysis of the CENRAP and

VISTAS RPOs. While the work of the RPOs is essential to individual States in developing regional haze plans, each state is required to analyze reasonable progress and perform a 4 factor analysis for their individual reasonable progress plans. Louisiana appears to have relied solely on the technical document supplied by a CENRAP contractor (Alpine Geophysics) and has not formulated a state specific plan for reasonable progress. While it is appropriate for a state to cite a technical analysis performed by an RPO, it does not constitute a complete analysis of reasonable progress for an individual state.

15. The State suggests that additional reductions would cost as much as \$1696/ton. Again, this dollar amount is cited from a technical document supplied by an RPO contractor and is based on regional averages. However, the plan does not discuss why this dollar amount is not reasonable, nor does it explore other reduction options and associated costs. The plan should explore local reduction possibilities, specifically within an AOI, and fully evaluate cost effectiveness on a local scale. The obligation to perform a 4 factor analysis should not be limited to state or regional averages of costs for source categories or by specific pollutant.
16. The plan does not provide information with respect to the 20% cleanest days at Breton WA. The Regional Haze Rule requires that reasonable progress goals be established for protection of the 20% cleanest days at each Class I area, as well as improvement of the 20% dirtiest days.
17. Again, an AOI analysis is completely absent from the SIP. However, the SIP asserts that some RPO inventory estimates have double counted Gulf emissions at Breton WA, and implies that these emissions have significance. Since no apportionment of emissions by source category was provided by the State, the magnitude of the importance of Gulf emissions is unknown. This source category should be clearly described, as well as all other sources categories that contribute to visibility impairment at Breton.

Fire

18. The plan indicates that LDEQ does not have primacy with respect to smoke management plans therefore, does not provide information regarding smoke and its impact on Breton. It has been customary for the agency delegated to respond to regional haze requirements to work with their smoke management agency to develop information on how the State currently addresses or plans to address potential smoke impacts at Class I areas. If the State believes that smoke has little impact at Breton and will not impact visibility in the future, this information should be provided in the SIP.

Verification and Contingencies

19. The State suggests complete reliance on the IMPROVE monitoring network and does not describe alternative monitoring scenarios. The Regional Haze Rule is clear that states are ultimately responsible for monitoring in support of visibility protection. This is the case regardless of the availability of Federal funding for monitoring programs. Although we

share your interest in maintaining IMPROVE, the plan should provide additional discussion on alternatives to tracking regional haze progress.

Coordination and Consultation

20. In addition to establishing AOIs, the State should discuss and identify contribution of visibility impairing emissions from areas outside of Louisiana. This should include apportionment information developed by the RPOs regarding Mississippi, Alabama, and off shore Gulf emissions.

The State should present apportionment information to neighboring states and the Gulf permitting authorities and provide information regarding consultation with these entities. Clearly identifying these attributions also will assist in future requirements to assess the progress towards natural visibility conditions Breton during the State's mid-term review process in 5 years.

21. On page 4-1, the plan states "Louisiana is committed to continue to coordinate and consult with the federal land managers (FLMs) during the development of future progress reports and plan revisions, as well as during the implementation of programs having the potential to contribute to visibility impairment in the mandatory Class I areas." The Regional Haze rule is clear that states should develop an on-going consultation plan as opposed to a general commitment. Please provide more detail regarding Louisiana's plan for continued consultation, such as timelines for future Regional Haze Plan revisions and coordination with FLMs on specific programs such as Prevention of Significant Deterioration/New Source Review.

Attachment 1

Comments of the US Fish and Wildlife Service on the BART Determination of ConocoPhillips Company – Alliance Refinery

The most significant emission units at the Alliance Refinery are in the process of being controlled through a 2005 EPA Consent Decree. The three units being controlled are the Fluidized Catalytic Cracker (for SO₂), Process Refinery Flares (for SO₂) and Crude Unit Heater (for NO_x). ConocoPhillips presents no basis for the statement in Section 2.1.4 of the Best Available Retrofit Technology (BART) determination which states, “All of these control requirements are considered more stringent than BART and are therefore considered to satisfy the regulatory requirements of the BART analysis.” Such a statement cannot properly be made without documentation that a five-factor BART analysis was performed for each unit. Nothing in the EPA Guidelines for Best Available Retrofit Technology Determinations¹ excuses a source from performing the five-factor analysis, even though some significant level of control has been recently initiated. EPA precedent has confirmed that controls deployed under a Consent Decree do not supersede the need for deploying controls determined under a BART determination.² Therefore, the Regional Haze SIP should contain all the documentation to justify that the Consent Decree controls result in control of visibility impairing pollutants to a greater extent than BART. Nevertheless, it is noted that the controls being initiated are among the most stringent controls that would be considered in a BART determination for each of the three emitting units. If the Louisiana Department of Environmental Quality (LDEQ) concludes after a BART determination is performed that the control technologies in the Consent Decree are determined to be BART, then such a statement should be included in the Regional Haze SIP.

Since one of the statutory BART evaluation factors is cost-effectiveness, it is necessary that the annualized cost and cost per ton of each proposed control technology be thoroughly presented in the BART determination document.

Specifically, ConocoPhillips is proposing a wet gas scrubber for SO₂ control to be deployed in 2009 on the Fluidized Catalytic Cracker Unit; SCR for NO_x control to be deployed in 2008 on the Crude Unit Heater; and a yet-to-be-defined control technology with a control efficiency of at least 96.3% for SO₂ control for the Process Refinery Flares. The specific control technology for the Crude Unit Heater should be defined in the Regional Haze SIP. The wet gas scrubber for the Fluidized Catalytic Cracker is stated to reduce SO₂ emissions from 550.24 lb/hr to 275.12 lb/hr, showing 50% control efficiency. This technology is capable of significantly higher emission control, possibly 90%. This apparent deficiency in emission control should be explained, or a commitment should be made to a higher level of control. A five-factor BART analysis would likely generate a cost-effective technology with much higher control efficiency.

The Consent Decree mentioned above (Civil Action No. H-05-0285) is referenced but is not attached to the ConocoPhillips BART determination or the Regional Haze SIP. This document should be included as one of the appendices in the RHSIP.

¹ See 40 CFR Part 51, Appendix Y. The U.S. Environmental Protection Agency finalized its BART Guidelines on June 15, 2005, and published the preamble and final rule text in the Federal Register on July 6, 2005. The rulemaking action added Appendix Y to Part 51, titled “Guidelines for BART Determinations Under the Regional Haze Rule.”

² EPA, Region 8 Comments on Proposed BART Determination and Permit, signed by Callie A. Videtich, dated July 19, 2007, regarding Tri-State Generation and Transmission Association, Inc., Craig Station.

Attachment 2

Comments of the US Fish and Wildlife Service on the BART Determination of Sid Richardson Carbon Company, Addis Plant

The feedstock for this carbon black manufacturing company is 3% sulfur carbon black oil. This sulfur content is not improved upon by any other carbon black manufacturing facility, so Sid Richardson Carbon Company (Sid Richardson) considers this to be Best Available Control Technology (BACT). Likewise, Sid Richardson states that no other carbon black manufacturing facility deploys HEPA/ULPA or wet scrubbing that might be considered more efficient than the Sid Richardson fabric filters that are 99.923% efficient in collecting particulate matter, so this technology is considered BACT by Sid Richardson.

Sid Richardson has stated that no other carbon black manufacturing facility has deployed any SO₂ or NO_x control technology that might be used in the reactors, dryers or flairs. Thus, none of these technologies could be deemed to be technically feasible applications. However, the Degussa Engineered Carbons, LP carbon black plant in Baytown, Texas (Permit Number 9294) deployed a caustic scrubber for SO₂ control in the early 2000's. This demonstrates technical feasibility of a caustic scrubber on a carbon black plant. This portends that Sid Richardson (and/or Louisiana Department of Environmental Quality (LDEQ)) perform a Best Available Retrofit Technology (BART) determination that includes an SO₂ scrubber as an alternative control technology with a supporting cost analysis.

In summary, the current operating parameters of the Addis Plant that are declared to be BACT, which can be referred to as the "most stringent controls available,"¹ are as follows:

- Primary and Secondary Fabric Filters that are 99.923% efficient
- Good combustion control to limit NO_x formation in the dryers
- 3% sulfur carbon black oil as feedstock
- Use of pipeline quality natural gas for clean flairs

From the above declarations (with the possible exception of an SO₂ scrubber as noted above) LDEQ may choose conclude that the Sid Richardson Carbon Company, Addis Plant is operating with the most stringent controls available, which the EPA BART Guidelines deem to satisfy BART.

The LDEQ should formally acknowledge the assertions of the Sid Richardson Carbon Company, Addis Plant by documenting agreement with these operating conditions in the Regional Haze State Implementation Plan so as to make them federally enforceable.

¹ See 40 CFR Part 51, Appendix Y. The U.S. Environmental Protection Agency finalized it's BART Guidelines on June 15, 2005, and published the preamble and final rule text in the Federal Register on July 6, 2005. The rulemaking action added Appendix Y to Part 51, titled "Guidelines for BART Determinations Under the Regional Haze Rule." The section of the guidelines referenced above (Section IV, D, Step 1, 9) appeared in the Federal Register at 70 FR 39165, July 6, 2005.

Attachment 3

Comments of the US Fish and Wildlife Service on the BART Determination of Rhodia, Inc. Sulfuric Acid Plant at Baton Rouge, LA

The subject BART Determination is deficient in considerable information that would be required for a third-party to corroborate the conclusions. Please supply the following information:

- A description of the current sulfur acid plants' equipment configuration and existing air pollution control equipment
- Spreadsheets itemizing equipment and construction costs of each of the BART alternatives
- Documentation to support each cost estimate, including vendor quotes, bid specifications and/or other authoritative information

The literature does not seem to support a claim that single contact, caustic scrubbing of tail gas can deliver 3-hour average emission limits of 3.0 pounds per ton of 100% H₂SO₄. An SO₂ to SO₃ conversion efficiency of the stated 94% would be expected to result in emissions of about 82 pounds per ton of product. Only a 99.7% conversion efficiency might yield 4.0 pounds per ton, 24-hour average, in an otherwise uncontrolled plant. This is the reason for the above request to supply information on existing control equipment. The literature suggests that this 99.7% level of conversion efficiency is attained only through the use of double-absorption technology. This is further evidenced by a review of the RACT/BACT/LAER Clearinghouse on EPA's webpage, where determinations issued during the last 10 years show only double-absorption process technology producing SO₂ emissions in the range of 3.5 to 4.0 pounds per ton of 100% H₂SO₄.

The BART determination does not supply an incremental cost analysis, instead citing that all the control alternatives have equivalent destruction efficiencies (approximately 94%). As discussed above, utilizing double-absorption alternative can achieve significantly greater destruction efficiency, (up to 99.7%). Therefore, an incremental cost analysis should be supplied.

Assuming the above premise that caustic scrubbing with 94% destruction efficiency does not result in adequate control, consideration should be given to the addition of a mist eliminator to the exit gases.

There is no mention of Continuous Emission Monitors being used as a method of compliance.

INFORMATION MEMORANDUM FOR THE ASSISTANT SECRETARY FISH AND WILDLIFE AND PARKS

FROM: Sandra Silva, Chief, Branch of Air Quality, US Fish and Wildlife Service

PHONE #: 303 914-3801

SUBJECT: FWS Comments on the draft Louisiana (LA) Regional Haze State Implementation Plan (plan)

I. SUMMARY

In 1999, EPA issued regulations requiring all States to make reasonable progress toward the national visibility goal of no human-caused visibility impairment at all Class I areas. The FWS administers 21 Class I areas. The regulations require all States to establish plans by 2007, including initial control of older major stationary sources with Best Available Retrofit Technology (BART).

In reviewing the draft Regional Haze plan provided by Louisiana, FWS found that several requirements of the Regional Haze Rule were deficient in the plan. These elements include: insufficient analysis of reasonable progress and long term strategy for regional haze; inadequate inter-state apportionment and consultation; lacking information regarding Best Achievable Control Technology (BART); and omission of established visibility goals, as expressed in deciviews, for the 20% worst and the 20% best visibility days at the Breton Wilderness Area.

The FWS has communicated these concerns to LA through several consultation phone calls. The due date for submitting the comments to the State is **January 20, 2008**.

II. DISCUSSION

The Clean Air Act requires all States to consult with the Federal Land Managers of Class I areas 60 days before a public hearing on any portion of the State's plan to address visibility impairment. The Louisiana plan is one of more than 35 plans the FWS Branch of Air Quality will review and provide technical feedback to the State. Due to the number of plans being reviewed and the demanding timeframe for review of each plan, efficient coordination between the FWS Branch of Air Quality and the Assistant Secretary's (AS) Office will be required. The FWS received LA Regional Haze draft plan on November 21, 2007.

The FWS has completed the review of the LA plan and have drafted a cover letter with an enclosure that describes the comments in detail. Through a previous