



APPENDIX D

Arkansas Communication and Consultation Strategy for Regional Haze Planning Period II

Division of Environmental Quality
Office of Air Quality

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LIST OF ACRONYMS AND ABBREVIATIONS

<u>ACRONYM/ABBREVIATION</u>	<u>ORIGINAL PHRASE/WORD</u>
DEQ	Arkansas Department of Energy and Environment, Division of Environmental Quality
Affected State	A state with a Class I area impacted by visibility impairing emissions from Arkansas sources
CenSARA	Central States Air Resource Agencies
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
SIP	State Implementation Plan
FLM	Federal Land Manager
OAQ	Office of Air Quality
The Rule	Regional Haze Regulations, as amended
Staff	DEQ Office of Air Quality staff
RPO	Regional Planning Organization

I. Overview

The Office of Air Quality (OAQ) of the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), prepared this document primarily to provide a framework for efficient and effective coordination among DEQ, the United States Environmental Protection Agency (EPA), states with Class I areas impacted by visibility impairing emissions from Arkansas sources (affected states), and tribes to achieve a successful Regional Haze planning process for Arkansas for Planning Period II. Separately, this document also sets forth a framework for a stakeholder process. Successful development of a Regional Haze State Implementation Plan (SIP) requires that responsible agencies effectively communicate and consult with a variety of stakeholders on a defined timeline with varying degrees of formality. The requirements of the Regional Haze Rule¹ indicate the need for a certain level of communication among specific parties. DEQ understands that additional, informal communication may be necessary to achieve sound results in a timely manner.

OAQ developed this document to communicate DEQ's strategy for fulfilling requirements, policies, and recommendations associated with consultation and coordination as provided in 40 CFR 51.308 as well as for conducting a broad communication strategy beyond simply addressing those requirements. OAQ structured this document to provide an overview of Regional Haze-related communications and the associated requirements necessary to submit an effective Planning Period II SIP on behalf of the State of Arkansas.

II. Background

The Regional Haze Rule requires each state to:

...develop programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution

These programs are set forth in state implementation plans (SIPs) intended to address ten-year planning periods. States are currently developing plans for Planning Period II (2018–2028), which are due in July 31, 2021. The shared goal of these SIPs is to protect and improve visibility in certain federally-designated national parks and wilderness areas (Class I Areas) in the United States.² The EPA established a long-term goal in the Regional Haze Rule of attaining natural visibility conditions in each Class I Area by 2064. The Rule requires robust communication between states and federal land managers (FLMs) in the development of these plans. Arkansas is coordinating with other states in the Central States Air Resource Agencies (CenSARA) regional planning organization (RPO), designated FLMs, Tribes, and EPA to perform the underlying technical work to develop SIPs for Planning Period II.

¹ EPA (1999). "Regional Haze Regulations: Final Rule." (64 FR 35714) as amended by EPA (2017). "Protection of Visibility: Amendments to Requirements for State Plans." (82 FR 3078)

² A list of the Class I areas can be obtained at <https://www.epa.gov/visibility/list-areas-protected-regional-haze-program>.

III. Statement of Commitment

DEQ intends to follow this framework to meet the requirements outlined in 40 CFR 51.308(f)(2)(ii) and 51.308(i). This document incorporates plans to engage with potentially affected sources of visibility impairing emissions, the public, and other stakeholders.

IV. Consultation Requirements

40 CFR 51.308(f)(2)(ii) specifies consultation requirements for states that are reasonably anticipated to contribute to visibility impairment in at least one federal Class I area in another state:

- (ii) The State must consult with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area to develop coordinated emission management strategies containing the emission reductions necessary to make reasonable progress.
 - (A) The State must demonstrate that it has included in its implementation plan all measures agreed to during state-to-state consultations or a regional planning process, or measures that will provide equivalent visibility improvement.
 - (B) The State must consider the emission reduction measures identified by other States for their sources as being necessary to make reasonable progress in the mandatory Class I Federal area.
 - (C) In any situation in which a State cannot agree with another State on the emission reduction measures necessary to make reasonable progress in a mandatory Class I Federal area, the State must describe the actions taken to resolve the disagreement. In reviewing the State's implementation plan, the Administrator will take this information into account in determining whether the plan provides for reasonable progress at each mandatory Class I Federal area that is located in the State or that may be affected by emissions from the State. All substantive interstate consultations must be documented.

40 CFR 51.308(i) specifies the requirements for state and FLM coordination:

- (1) By November 29, 1999, the State must identify in writing to the Federal Land Managers the title of the official to which the Federal Land Manager of any mandatory Class I Federal area can submit any recommendations on the implementation of this subpart including, but not limited to:
 - (i) Identification of impairment of visibility in any mandatory Class I Federal area(s); and

- (ii) Identification of elements for inclusion in the visibility monitoring strategy required by § 51.305 and this section.
- (2) The State must provide the Federal Land Manager with an opportunity for consultation, in person at a point early enough in the State's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the Federal Land Manager can meaningfully inform the State's decisions on the long-term strategy. The opportunity for consultation will be deemed to have been early enough if the consultation has taken place at least 120 days prior to holding any public hearing or other public comment opportunity on an implementation plan (or plan revision) for regional haze required by this subpart. The opportunity for consultation on an implementation plan (or plan revision) or on a progress report must be provided no less than 60 days prior to said public hearing or public comment opportunity. This consultation must include the opportunity for the affected Federal Land Managers to discuss their:
 - (i) Assessment of impairment of visibility in any mandatory Class I Federal area; and
 - (ii) Recommendations on the development and implementation of strategies to address visibility impairment.
- (3) In developing any implementation plan (or plan revision) or progress report, the State must include a description of how it addressed any comments provided by the Federal Land Managers.
- (4) The plan (or plan revision) must provide procedures for continuing consultation between the State and Federal Land Manager on the implementation of the visibility protection program required by this subpart, including development and review of implementation plan revisions and progress reports, and on the implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas.

V. Collaboration Process

DEQ recognizes the necessity of frequent and open communication with the FLMs, EPA, and other states throughout SIP planning activities to ensure a transparent and effective decision-making process. Informal discussions, formal state and FLM consultations, and engagement with stakeholders and public are critical to successful SIP development.

CenSARA is the multi-jurisdictional organization that coordinates discussions among member states involved in regional haze planning. CenSARA's Regional Haze Committee includes representatives from States, Tribes, and local air quality agencies in the central states region,³

³ Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, Oklahoma and Texas

affected FLMs, and EPA Regions 6 and 7. The meetings provide a platform for all partners within the region to voice and share concerns related to development of the Planning Period II SIP development.

CenSARA's Regional Haze Committee helps DEQ ensure an appropriate level of consultation and coordination. However, DEQ retains the responsibility of developing and submitting a Planning Period II SIP for the State of Arkansas. This section provides a blueprint of how DEQ will comply with the formal consultation requirements and engage in productive communication, outreach, and education aid in the development of a robust and approvable SIP revision for Planning Period II.

DEQ will use a five-tiered consultation and coordination plan. The tiered approach described in this section outlines the activities that DEQ will use to facilitate communication, both among affected states and federal partners (EPA and FLMs) and in state with stakeholders. DEQ plans to include records of substantive consultations in Arkansas's Regional Haze Planning Period II Submittal. Appendix D-1 provides DEQ's strategies for outreach to parties identified in the tiered communication strategy detailed below. Appendix D-2 provides a communication log. Appendix D-3 provides a list of consultation and coordination resources, policies, and procedures. Appendix D-4 contains records and correspondence documenting consultation.

A. Tier I: Participation in Educational and General Regional Haze Meetings and Webinars

1. Objective:

Tier I communication provides a forum for regional discussions regarding strategy options and planning milestones for Regional Haze Planning Period II SIPs. The intent of this level of discussion is to start an ongoing dialogue among all parties.

2. What:

Tier I includes participation in national meetings and educational webinars designed to inform states, FLMs, EPA, tribes, etc. on specific Regional Haze planning topics.

3. Participants:

Tier I participants include state and local air quality agencies, tribes, EPA national and regional offices, and FLMs.

4. Key to Success:

Successful Tier I communication ensures that, throughout the planning process, everyone is communicating from a common knowledge base.

B. Tier II: States Informal Consultation

1. Objective:

Tier II conversations allow a continuation of informal discussions that began at the Tier I level. These discussions are primarily, but not limited to, discussions

with other CenSARA states about a broad range of Regional Haze-related topics. States are able to share concerns in more detail regarding strategies to meet obligations for addressing interstate transport of visibility impairing pollutants.

2. What:

CenSARA coordinates monthly conference calls with the state and local air quality agencies in the central states regions. Additional follow-up conversations among states may occur by letter, email, telephone, or in person. At this level discussions become more focused on common Class I areas (affected by multiple states) and region-specific strategies. The CenSARA Regional Haze state-only calls typically follow monthly conference calls that include the FLMs and EPA regional representatives.

3. Participants:

Tier two participants include state and local air quality agencies.

4. Key to Success:

Successful Tier II communications provide states with the opportunity to brainstorm strategies to address interstate transport obligations. Tier II communications build off the information shared during Tier I and prepare states to discuss strategies and concerns with federal partners in Tier III communications.

C. Tier III: States/FLMs/EPA Informal Consultation

1. Objective:

Tier III provides for informal consultation among the states, tribes, FLMs and EPA regional offices regarding the information gained during Tier I and Tier II conversations. This type of communication encourages engagement from the key federal partners throughout the SIP planning process. In addition, Tier III communications ensure that FLMs have the opportunity to provide input and recommendations to inform Arkansas's policy decisions regarding the State's long-term strategy well in advance of SIP proposal (<120 days prior to any public comment period opportunity).

2. What:

CenSARA coordinates monthly conference calls with the state and local air quality agencies in the central states regions, tribes, FLMs, and EPA regional offices. Additional state-specific follow-up conversations may occur by letter, email, telephone, or in person. Multilateral conversations allow for consideration of multiple perspectives on key issues in the SIP planning process. Tier III also includes conversations between DEQ and EPA Region 6, between DEQ and FLMs, and between DEQ and other states with Class I areas potentially impacted by visibility impairing emissions from Arkansas sources.

3. Participants:

Tier III participants include state and local air quality agencies, tribes, EPA regional offices, and FLMs.

4. Key to Success:

Successful Tier III communications provide adequate opportunity for states to share region- or state-specific concerns and for FLMs and EPA regional offices to provide their perspectives on potential state strategies to addressing visibility impairment at Class I areas in the central states region.

D. Tier IV: Stakeholder/Public/Affected Facilities Engagement

1. Objective:

Tier IV communications consist of engagement between DEQ and affected facilities, the public, and other stakeholders regarding policy options pursuant to Tier I, Tier II, and Tier III communications. Tier IV communications ensure transparency in the SIP planning process and provide the opportunity for affected facilities, the public, and other stakeholders to inform DEQ of local issues, site-specific constraints, and other concerns.

2. What:

Tier IV communications include various modes of outreach including in-person meetings, conference calls, webpage maintenance, letters, phone calls and emails. To facilitate Tier IV communications, DEQ maintains a Regional Haze webpage that will be the primary repository of information regarding Regional Haze SIP development for Planning Period II. DEQ plans to provide regular updates using stakeholder email distribution lists, organize a working group, and provide in-person and/or remote topic-specific meeting opportunities.

3. Participants:

Tier IV participants include DEQ, potentially-affected industries, consumer and business groups, environmental organizations, and the general public.

4. Keys to Success:

Successful Tier IV communications provide adequate opportunity to discuss topics of interest to stakeholders, share information, build understanding, and address questions. Successful Tier IV communication ensures transparency in SIP development.

E. Tier V: Formal States/FLM Consultation on the Pre-Proposal SIP Revision and Progress Report

1. Objective:

Tier V communications provide FLMs and affected states with the opportunity to provide feedback on any pre-proposal draft SIP revision or progress report. For Tier V, DEQ specifically seeks the FLM's and affected states' assessment of the

impact of the long-term strategy included in the pre-proposal draft SIP revision on Class I areas prior to the public comment period.

2. What:

DEQ initiates Tier V communications at least sixty days prior to any public hearing or public comment opportunity on the proposed SIP revision. DEQ notice to the affected states and FLMs includes a copy of the pre-proposal draft SIP revision and associated technical documents. Tier Five communications may occur via email, phone call, in-person meetings, or formal comment letters. DEQ will include a description in the final SIP submission to EPA concerning how DEQ addressed any comments provided by the FLMs.

3. Participants:

Tier V participants include DEQ, states with Class I areas impacted by emissions from Arkansas sources, and FLMs of Class I areas impacted by emissions from Arkansas sources.

4. Key to Success:

Successful Tier V communications assist DEQ in the final stages of development of a proposed SIP revision for Regional Haze PPII. By considering FLM and affected state recommendations, ADEQ ensures technical and legal soundness of the Regional Haze Planning Period II SIP revision prior to seeking public comment.

The table on the following page summarizes ADEQ's tiered communication strategy.

Table 1 Tiered Communication Strategy Summary

	Tier I	Tier II	Tier III	Tier IV	Tier V
General Description	General/Educational Regional Haze Meetings and Webinars	States Informal Consultation	States/FLMs/EPA Informal Consultation	Stakeholder/Public/Affected Facilities Engagement	Formal States/FLM Consultation
Communication Forum	National meetings and webinars	In-person meetings, conference calls, emails, or other forms of communication	In-person meetings, conference calls, emails, or other forms of communication	Listserv, meetings, presentations, conference calls, website, or other forms of communication	In-person meetings, conference calls, emails, letters, or other documented forms of communication
Purpose	Share information about Regional Haze efforts that can carry over to more specific discussions in Tiers II–V	Informal focused dialogue among state and local air quality agencies stemming from Tier I	Informal focused dialogue among state air quality agencies, tribes, FLMs, and EPA Regional Offices stemming from Tier I and Tier II.	Informal communication with stakeholders during the pre-proposal development phase of the Planning Period II SIP revision	Formal communication to discuss pre-proposal SIP revision drafts
Lead Agency	CenSARA	CenSARA	CenSARA	DEQ	DEQ
Audience	CenSARA Regional Haze Committee (States, Tribes, FLM, & EPA)	CenSARA Regional Haze Committee Subgroup (states and local air quality agencies)	CenSARA Regional Haze Committee (States, Tribes, FLM, & EPA)	Local stakeholders, including industrial sources, consumer groups, environmental groups, and interested members of the public	States with Class I areas affected by emissions from Arkansas sources and FLMs
Key to Success	Common understanding among state and local air quality agencies, tribes, FLMs, and EPA of Regional Haze technical, legal, and procedural concepts	Open communication; Consensus preferred	Open communication; Recommendations from multiple perspectives	Open and transparent communication; Opportunity to discuss local ideas and concerns of the public, affected sources, and other groups	Final feedback on technical basis and policy decisions included in pre-proposal draft SIP revision and progress report before the public comment period.

F. Communications Schedule

This section outlines the steps and approximate timing of the collaboration process described above. The timelines for SIP development and submittal may shift based on changes to the Rule, timing of EPA guidance, and other factors that occur during consultation.

The timeline below incorporates informal and formal consultation and coordination leading up to SIP submittal by no later than July 2021.

2017

December	Tier I: Round 2 Regional Haze Planning Workshop hosted by CenSARA, Western States Air Resource Council, and Western Regional Air Partnership
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2018

January– December	Tier II: Monthly consultation among state and local air agencies in the central states region
January– December	Tier III: Monthly consultation between states and local air agencies in the central states region, tribal organizations, EPA regional offices and FLMs.

2019

January– December	Tier II: Monthly consultation among state and local air agencies in the central states region
January– December	Tier III: Monthly consultation between states and local air agencies in the central states region, tribal organizations, EPA regional offices and FLMs.
January– December	Tier I: Participation in EPA webinars as guidance documents are released
October	Tier I: Multi-regional Regional Haze PPII workshop
Fall	Tier II: Consultation with states with Class I areas impacted by Arkansas sources and states whose sources impact Arkansas Class I areas regarding source screening approach
	Tier III: Consultation with FLMs of Class I areas potentially affected by Arkansas sources regarding source screening approach
	Tier III: Conversations with EPA regarding source screening approach
	Tier IV: Initiation of stakeholder engagement for SIP development process Topics: PPII Overview, Source Screening, Control Strategies

2020

January– December	Tier II: Monthly consultation among state and local air agencies in the central states region
January– December	Tier III: Monthly consultation between states and local air agencies in the central states region, tribal organizations, EPA regional offices and FLMs.

Winter	Tier IV: Continued stakeholder engagement Topics: Control measures to include in long-term strategies, 2028 reasonable progress goals
Spring	Tier IV: Continued stakeholder engagement Topics: Interstate transport obligations, monitoring strategy, progress report
Summer	Tier V: Affected State and FLM consultation on pre-proposal draft SIP including enforceable component
Fall	Tier IV: Public comment period on proposed SIP

2021

Winter	Tier IV: Continuation of public comment period and public hearing on proposed SIP
Spring	Adoption of Rulemaking and submission of SIP to EPA



APPENDIX D-1

Communication and Consultation Strategies

Division of Environmental Quality
Office of Air Quality

APPENDIX D-1: COMMUNICATION AND CONSULTATION STRATEGIES

The following pages provide overviews of the key interactions between Arkansas and other states, affected federal agencies, and with stakeholders affected by the plan. Each section includes documentation to outline Regional Haze outreach and consultation strategies employed in communication with the following:

- neighboring states and tribes;
- Federal Land Managers;
- the Environmental Protection Agency; and
- affected stakeholders and facilities.

Due to the regional nature and complexity of Regional Haze plans, which address long-range transport and impacts of air pollution on visibility, close collaboration among state and federal agencies is essential. To support this inter-agency effort, DEQ participates in meetings coordinated by CenSARA to collaborate with other states, tribes, EPA, and FLMs to conduct the technical and policy analyses needed to provide a common basis for the individual SIPs.

DEQ's communication plan employs various methods of outreach and consultation, as outlined in Table D-1 below:

Table D-1: Regional Haze Planning Communication and Consultation Tools

Strategy	Entities Involved	Purpose
Workshop	States, FLMs, EPA, Stakeholders	For working through detailed processes in-person, communicating regional strategies with others, etc.
Conference Call	States, EPA, FLMs Stakeholders	For discussion of main points and strategies for RH planning, next steps
Web-based Meeting	Public, State-to-State, EPA, FLMs	For sharing documents during discussion between partners; Public Meetings; data-heavy discussions between States for RPGs, etc.
Internal Meeting	ADEQ Policy and Planning Staff	For Arkansas-specific planning and analyses
DEQ Webpage	Public, Stakeholders	To announce important milestones in planning; to announce review periods or public meetings; updates of ongoing RH Planning status
DEQ RH Planning Listserv	Public, Stakeholders	To announce important milestones in planning; to announce review periods or public meetings; updates of ongoing RH Planning status

Strategy	Entities Involved	Purpose
DEQ Public Notices/News Releases	Public, Stakeholders	To announce important milestones in planning; to announce review periods or public meetings; updates of ongoing RH Planning status
DEQ Fact-sheet	DEQ Director, Arkansas Legislators, High-level officials, the Public (via webpage link)	To give updated status reports in summary format
Email/Phone	States, EPA, FLMs, Stakeholders, Public, Affected Facilities	For conversations between ADEQ and another party (question-initiated contact)
Letter	Affected Facilities, FLMs, EPA, State-to-State	For official notifications
Social Media	Public, Stakeholders	To provide the public with at-a-glance information about important dates, milestones, and public hearings
Online Polling	States, FLMs, Stakeholders	To seek input on specific issues and priorities

I. Neighboring State and Tribal Engagement Strategy

While there are no tribal lands within the borders of Arkansas, there are sixty-six tribal governments within EPA Region 6. Louisiana, New Mexico, Oklahoma, and Texas are home to Region 6 Native American organizations.

EPA encourages tribes to participate in the regional planning organizations, and engage directly with EPA, FLMs, and states to protect their interests. Tribal governments are responsible for coordinating with federal and state governments to protect air quality on their sovereign lands, and to ensure their sources meet federal requirements. Tribes are not required, but have the option, to submit Tribal Implementation Plans (TIPs) for Regional Haze, in some cases, sources affecting visibility are located on tribal lands and sometimes emissions from other sources may impact tribal air quality. For this reason, states must include tribal organizations in their communication strategies.

There are no Federal Class I areas located in any of Region 6 tribal territories, but Region 6 states and EPA have included tribes in regular discussions about Regional Haze planning through monthly CenSARA-led conference calls.

List of CenSARA Members:

State Agencies:

- Arkansas - <http://www.adeq.state.ar.us/air/default.htm>
- Iowa - <http://www.iowadnr.gov/Environmental-Protection/Air-Quality>
- Kansas - <http://www.kdheks.gov/bar/index.html>
- Louisiana - <http://deq.louisiana.gov/subhome/air>
- Missouri - <http://dnr.mo.gov/env/apcp/index.html>

- Nebraska - <http://deq.ne.gov/NDEQProg.nsf/AirHome.xsp>
- Oklahoma - <https://www.deq.ok.gov/divisions/aqd/>
- Texas - https://www.tceq.texas.gov/agency/air_main.html

Local Agencies:

- City of Houston, Bureau of Pollution Control and Prevention - <http://www.houstontx.gov/health/Environmental/bpcp.html>
- City of Omaha - <https://publicworks.cityofomaha.org/air-quality-control>
- City of Wichita - <http://www.wichita.gov/Government/Departments/PWU/Pages/AirQuality.aspx>
- Douglas County Health Department - <http://www.douglascountyhealth.com/home>
- Galveston County Health District - <http://www.gchd.org/public-health-services/environmental-health-services>
- Johnson County Kansas Environmental Department - <http://www.jocogov.org/environment/air-quality>
- Kansas City Environmental Health Department - <http://kcmo.gov/health/environmental-health-services/>
- Lincoln (City of) - Lancaster County - <https://lincoln.ne.gov/city/health/environ/Air.htm>
- Linn County Air Quality Division - <http://www.linncleanair.org/>
- Polk County Air Quality Division - <http://www.polkcountyiowa.gov/airquality/>
- St. Louis, MO - <https://www.stlouis-mo.gov/government/departments/health/environmental-health>
- St. Louis County - <http://www.stlouisco.com/HealthandWellness/EnvironmentalServices/AirPollution>
- Unified Government of Wyandotte County - Kansas City, Kansas - <http://www.wycokck.org/airquality/>

The EPA requires states to establish reasonable progress goals for each Class I Area within the state and to consider impacts of emissions generated in the state on Class I Areas outside of the state. Because Class I Areas are sometimes located near or on the border between states, it is important that states communicate with each other about their strategies for achieving reasonable progress. In addition, states must communicate about control strategies because sources of emissions may be located near a state border or may travel long distances and impact Class I Areas in other states. The following questions will help Arkansas coordinate outreach to neighboring states:

1. Do emissions from neighboring states potentially affect any Arkansas Class I Areas?
 - a. If so, which pollutants are the pollutants of concern at the Class I Area?
 - b. Will a reduction in emissions be necessary to achieve reasonable progress goals?
 - c. Can the necessary reduction be achieved by the sources in Arkansas alone?

- d. What is the share of emissions reductions necessary from the neighboring state?
2. Are any large sources of emissions in your state located near the border?
 - a. If so, is it possible that emissions from the source are impacting Class I Areas on the other side of the border?
 - b. A quick qualitative analysis of local wind patterns and geography may help with this preliminary assessment and future conversations.
3. Who is the current point of contact on Regional Haze in neighboring states? Do they know who Arkansas's contacts are?
4. At what step in the planning process are Arkansas's neighboring states, and is DEQ at the same step?

II. Federal Land Managers Engagement Strategy

DEQ must provide the Federal Land Manager (FLM) with an opportunity for consultation, in person, at a point early enough in ADEQ's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the FLM can meaningfully inform DEQ's decisions on the long-term strategy. The opportunity for consultation should take place at least 120 days prior to holding any public hearing or other public comment opportunity on an implementation plan (or plan revision) for regional haze. DEQ must integrate continuing consultation with the FLMs into the plan (or plan revision) as provided in the subpart. Discussions related to the visibility protection plan must include:

- Development and review of implementation plan revisions;
- Development and review of progress reports; and
- Implementing other programs that might contribute to visibility impairment in Class I Federal Areas

DEQ must provide opportunity for FLM consultation on an implementation plan (or plan revision) or on a progress report no less than 60 days prior to the public hearing or public comment opportunity.

In developing any implementation plan (or plan revision), DEQ must include a description of how it addressed any comments provided by the FLM. DEQ is in contact with the following FLMs in regards to this plan revision:

Tim Allen	tim_allen@fws.gov	Fish and Wildlife Service
Bret Anderson	baanderson02@fs.fed.us	National Forest Service
Melanie Peters	melanie_peters@nps.gov	National Park Service
Kirsten King	kirsten_king@nps.gov	National Park Service
Don Shepard	don_shepherd@nps.gov	National Park Service

Pleasant McNeel	pmcneel@fs.fed.us	National Forest Service
Scott Copeland	copeland@colostate.edu	National Forest Service
Cherie Hamilton	cehamilton@fs.fed.us	National Forest Service (Ozark-St. Francis)
Norm Wagoner	nwagoner@fs.fed.us	National Forest Service (Ouachita)
Jeremy Ash	Jeremy.ash@usda.gov	National Forest Service (Hercules Glades)

III. Environmental Protection Agency Engagement Strategy

EPA is the agency responsible for acting on Regional Haze SIPs by approving or disapproving the plans. EPA bases its determination on whether the plans meet the Regional Haze rule requirements and provide for an effective regional program. EPA is an active partner in planning for Regional Haze, and hosts webinars and offers other guidance and resources to states. Arkansas maintains regular contact with EPA Region 6 representatives through monthly phone meetings, and through monthly CenSARA Regional Haze Committee calls.

IV. Affected Stakeholders and Public Engagement Strategy

Outcomes associated with Regional Haze planning have far-reaching influence, affecting facilities and the general public throughout the state. DEQ is committed to providing transparency of regulatory functions, and engaging in discussions with stakeholders and members of the public throughout the process.



APPENDIX D-2

Communication Log

Division of Environmental Quality
Office of Air Quality

APPENDIX D-2: COMMUNICATION LOG

The following table outlines DEQ communications on specific Regional Haze topics and the outcome of any associated conversations.

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
December 5–7, 2017	In-Person Workshop	States, Federal Land Managers, EPA National and Regional Offices	Lessons learned from Planning Period I States Planning Needs and Responsibilities Regional Consultation	States shared lessons learned from approaches during the first planning period and how to apply those lessons to Planning Period II. EPA provided updates on Rule changes and litigation. CenSARA states consultation process began for Planning Period II.	www.westar.org/Docs/regional%20haze%20workshop%202017/Dec5-7_2017national-regional-stateRegionalHazeWorkshop_final.pdf
February 20, 2019	Webinar	EPA, Tribal Entities, Federal Land Managers, States	EPA hosted; “Technical Guidance on Tracking Visibility Progress for the 2nd Implementation Period of the Regional Haze Program” release by EPA	Q&A and review of the guidance	www.epa.gov/visibility/technical-guidance-tracking-visibility-progress-second-implementation-period-regional
March 5, 2019	Web-Conference	CenSARA States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	Screening Methods discussion	Demonstration and discussion of the Arkansas Potential Screening Methods worksheet, Updates	CenSARA States and Federal Partners Communication
April 9, 2019	Conference Call	CenSARA States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	Early planning discussion	Further discussion of screening methods, EPA Technical Guidance	CenSARA States and Federal Partners Communication

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
May 7th, 2019	Conference Call	CenSARA States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	Early planning discussion	Nat'l Reg. Haze meeting discussion; Updates; Information sharing with neighboring states	CenSARA States and Federal Partners Communication
June 4, 2019	Conference Call	CenSARA States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	National RH Meeting Planning Discussion	Revised agenda for National RH Meeting; State & Federal partner RH planning updates	CenSARA States and Federal Partners Communication
June 25, 2019	Conference Call	States, Federal Land Managers, EPA National and Regional Offices	Emissions platform and modeling for RH	Update on development of 2016 v1 emissions platform and projects (including 2020 mobile emissions estimates), EPA and state modeling of the 2016 platform, Update on EPA's regional haze modeling	Federal/State Technical Work Collaboration Group
July 9, 2019	Conference Call	CenSARA States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	National RH Meeting Planning Discussion; Updates	Logistics for National RH Meeting; State & Federal partner RH planning updates	CenSARA States and Federal Partners Communication
August 13, 2019	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴	National RH Meeting Planning Discussion; Updates	VISTAS data not to be used until updated; RH Guidance with OMB to be released soon	CenSARA and VISTAS States and Federal Partners Communication

⁴ Arkansas (Clark, Hossan, Montgomery, Treece); Iowa (Johnson); Kansas (Hodgins, Deahl); Louisiana (Babin); Missouri (Alsharafi, Downs, Maliro); Nebraska (Wharton); Oklahoma (Kirlin, Garbe, Richardson); Texas (Gifford, Galvan, Mellberg, Earnest, Shirley, Meiler); U.S. Environmental Protection Agency (EPA) (Huser, Keas); Federal Land Managers (FLM) Shepherd -National Park Service, Wickman, McNeel-Forest Service (FS), Copeland; Tribal (Valdivieso - Ysleta del Sur Pueblo, Hathcoat – Cherokee Nation of OK, Curtis Martin – Choctaw Nation of OK); Other (Bickerstaff – MS, Bacon- AL, Boylan-GA, KY, SC, FL, WV)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
September 3, 2019	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁵	National RH Meeting Planning Discussion; Updates	Review of the RH Guidance; Discussion of which inventory year to use for anthropogenic emissions	CenSARA and VISTAS States and Federal Partners Communication
September 10, 2019	Webinar	EPA, States	Guidance on Regional Haze State Implementation Plans for the Second Implementation Period	EPA-led webinar for newly released RH Guidance	
October 28–30, 2019	In-Person Meeting	States, Federal Land Managers, EPA National and Regional Offices	National RH Meeting: Guidance Approaches for Planning Period II, Planning Period II progress	Check-in on progress, identify needs for state-to-state, state-to-FLM, and state-to-EPA informal consultation	Federal and State Partners Communication
November 5, 2019	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁶	Planning Period II progress and updates	AR shared possible 4-factor screening method and draft Communication Framework; Discussion of “On-The-Books” emission reductions; Discussion of drafting a regional timeline; Wrap-up discussions from National RH Meeting	CenSARA and VISTAS States and Federal Partners Communication

⁵ Arkansas (Clark, Hossan, Montgomery, Treece); Iowa (Johnson); Kansas (Hodgins, Deahl); Louisiana (Babin); Missouri (Alsharafi, Downs, Maliro); Nebraska (Wharton); Oklahoma (Kirlin, Garbe, Richardson); Texas (Gifford, Galvan, Mellberg, Earnest, Shirley, Meiler); U.S. Environmental Protection Agency (EPA) (Huser, Keas); Federal Land Managers (FLM) Shepherd -National Park Service, Wickman, McNeel-Forest Service (FS), Copeland; Tribal (Valdivieso - Ysleta del Sur Pueblo, Hathcoat – Cherokee Nation of OK, Curtis Martin – Choctaw Nation of OK); Other (Bickerstaff – MS, Bacon- AL, Boylan-Georgia, KY, SC, FL, WV)

⁶ Arkansas – David Clark, Iqbal Hossan, Kelly Jobe, Tricia Treece, Will Montgomery; Iowa – Matthew Johnson; Kansas – Doug Watson, Jayson Prentice; Louisiana – John Babin, Kelly Petersen; Missouri – Adel Alsharafi, Emily Wilbur, Mark Leath, Saeid Dinderloo; Oklahoma – Cooper Garbe, Tom Richardson; Texas – Javier Galvan, Bob Gifford, Laura Gibson, Margaret Earnest, Vincent Meiler; R6 – Dayana Medina, Jennifer Huser; R7 -Jed Wolkins, Lance Avey; OAQPS – Ashley Keas; NPS – Don Shepherd; FS – Jeremy Ash, Brett Anderson; Others – Elliott Bickerstaff (MS), Randy Strait and Elliot Tardif (NC), John Hornback, Tim Martin (AL); Georja Kriebs (Ponca Tribe of Nebraska)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
November 14, 2019	Web-Conference	Missouri DNR ⁷ Arkansas DEQ ⁸	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Missouri	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation
November 20, 2019	Conference Call	Arkansas DEQ and SWEPCO Representatives	Possible affected sources	AR shared possible screening method, sources affected	Stakeholder Engagement
December 3, 2019	Web-Conference	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁹	Discussion of planning—next steps; AR presentation of possible screening tool	On-the-books emission reductions; regional timeline/state goals; 4-factor analysis source identification methods; AR shared draft Consultation Plan and possible Screening Tool	CenSARA and VISTAS States and Federal Partners Communication
December 4, 2019	Web-Conference	Louisiana DEQ ¹⁰ Arkansas DEQ ¹¹	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Louisiana	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation

⁷ Wilbur, Leath, Alshafari, Dindarloo

⁸ Montgomery, Clark, Hossan, M. Day

⁹ Arkansas (Clark, Droke, Hossan, Jobe, Treece, Montgomery); Iowa (Fizel, Johnson); Kansas (Prentice, Deahl); Louisiana (Brown, Hayes, Aucoin); Missouri (Downs, Dindarloo); Oklahoma (Kirlin, Garbe, Richardson); Texas (Gifford, Galvan, Mellberg, Earnest, Shirley, Meiler); EPA (Wolkins, Avey, Keas, Stein, Etchells, Timin); FLM (Shepherd, Anderson, McNeel); Tribal (Ponca -NE); Other (Tardiff, Poff, Martin, Downs, Byeong, Al-Rawi, Hornback)

¹⁰ Aucoin, Meyers, Hayes, Brown, Petersen, Ducote

¹¹ Rouse, Montgomery, Treece, Clark, Jobe, Droke

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
December 4, 2019	Web-Conference	Texas CEQ ¹² Arkansas DEQ ¹³	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Texas	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation
December 6, 2019	Web-Conference	EPA ¹⁴ Arkansas DEQ ¹⁵	Discussion of Visibility Threshold Selection Methodology	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis EPA provided feedback on potential revisions to improve the source selection methodology	Federal (EPA) Consultation
December 10, 2019	Web-Conference	National Park Service ¹⁶ U.S. Forest Service ¹⁷ U.S. Fish and Wildlife Service ¹⁸ Arkansas DEQ ¹⁹	Discussion of Visibility Threshold Selection Methodology	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis FLMs provided feedback on potential revisions to improve the source selection methodology	FLM Consultation

¹² Gifford, Shirley, Jacobsen, Earnest, Williamson, Clark, Galvan, Anderson, Huff, Herndon

¹³ Montgomery, Treece, Clark, Jobe, Droke

¹⁴ Medina, Feldman, Snyder, EtcHELLS, Huser, Gallegos, Damberg, Keas, Stein

¹⁵ Montgomery, Treece, Clark

¹⁶ Shepard, King, Peters

¹⁷ McNeal, Anderson, Ash, Pitrolo

¹⁸ Allen

¹⁹ Montgomery, Treece, Clark, Jobe, Droke

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
December 16, 2019	Email	U.S. Forest Service	Input on December 10 conference--clarification of details	December 16 reply from Arkansas; December 19 reply from Forest Service	FLM Consultation
December 30, 2019	Modified Methodology PowerPoint Presentation & Email Invitation to Schedule Consultation Meeting	Arkansas DEQ to: Oklahoma DEQ Kentucky DEQ Louisiana DEQ Missouri DEQ Illinois DEQ Indiana DEM Iowa DNR Texas CEQ <u>December 20, 2019:</u> FLMs EPA Regions 6 & 7	Arkansas 4-Factor Analysis and Affected Sources	Arkansas DEQ received EPA's, FLMs', and other states' feedback during round one discussions regarding the Arkansas's draft 4-Factor Analysis Methodology; Arkansas DEQ presented revised methods and results, and invited other states to schedule formal consultation meetings	Interstate Consultation <u>December 20:</u> FLM and EPA Consultation
January 7, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ²⁰	Planning Period II progress and updates	State plans for approaching 4-factor analyses source identification; Consultation plan updates; VISTAS Modeling Protocol; Timelines updates	CenSARA and VISTAS States and Federal Partners Communication
January 8, 2020	Letter	AR DEQ to Entergy, FutureFuel, SWEPCO	Information Collection Requests sent to Arkansas Facilities	DEQ received info to perform 4-factor analyses	Stakeholder Consultation

²⁰ Arkansas – David Clark, Iqbal Hossan, Kelly Jobe, Tricia Treece, Will Montgomery; Iowa – Matthew Johnson; Kansas – Doug Watson, Jayson Prentice; Louisiana – John Babin, Kelly Petersen; Missouri – Adel Alsharafi, Emily Wilbur, Mark Leath, Saeid Dinderloo; Oklahoma – Cooper Garbe, Tom Richardson; Texas – Javier Galvan, Bob Gifford, Laura Gibson, Margaret Earnest, Vincent Meiler; R6 – Dayana Medina, Jennifer Huser; R7 –Jed Wolkins, Lance Avey; OAQPS – Ashley Keas; NPS – Don Shepherd; FS – Jeremy Ash, Brett Anderson; Others – Elliott Bickerstaff (MS), Randy Strait and Elliot Tardif (NC), John Hornback, Tim Martin (AL); Georja Kriebs (Ponca Tribe of Nebraska)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
January 13, 2020	Web-Conference	Indiana DEQ ²¹ Arkansas DEQ ²²	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Indiana	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation
January 29, 2020	Web-Conference	Oklahoma DEQ ²³ Arkansas DEQ ²⁴	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Oklahoma	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation
February 4, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ²⁵	Planning Period II progress and updates	State progress on 4-factor analyses source identification; Consultation plan updates; Timelines updates	CenSARA and VISTAS States and Federal Partners Communication
February 5, 2020	Email/Formal Letter	From Arkansas DEQ to Illinois, Indiana, Kentucky, Louisiana, Missouri, Oklahoma, and Texas	“Ask” from Arkansas to other states with sources affecting Arkansas Class I Areas and request for formal consultation meetings	Arkansas identified sources in neighbor states to ask for four-factor analyses	Interstate Consultation

²¹ Deloney, Derf, Boling

²² Treece, Clark, Hossan, Jobe, Droke

²³ Garbe, Kirlin, Miller, Richardson, Bradley, Foster, Botchlet-Smith

²⁴ Montgomery, Treece, Clark, Hossan, Jobe, Droke

²⁵ Arkansas (Clark, Droke, Hosan, Jobe, Treece); Iowa (Johnson, Fizel); Kansas (Deahl, Prentice); Louisiana (Brown, Petersen); Missouri (Alsharafi, Leath, Dindarloo); Nebraska (Wharton); Oklahoma (Kirlin, Garbe, Richardson); Texas (Dickey, Gifford, Galvan, Lewis, Gibson, Mellberg, Earnest, Shirley); U.S. Environmental Protection Agency (EPA) (Medina, Huser, Wolkins, Avey, Keas, Stein, Ashley); Federal Land Managers (FLM) Shepherd, Pohlman-National Park Service, Anderson, Peters, McNeel-Forest Service (FS); Tribal (Hathcoat – Cherokee Nation); Other (Hornback - VISTAS, Bickerstaff – MS, Martin- AL, Poff-KY, SC)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
February 6, 2020	Email	From Louisiana, from Missouri	Receipt of “Ask” from Arkansas	Consultations scheduled	Interstate Consultation
February 20, 2020	Email/Letter	From National Parks Service to Arkansas DEQ	Updated NPS air-related contacts	Contact list updated	Federal Partners Communication
February 12, 2020	Web-Conference	Louisiana DEQ ²⁶ Arkansas DEQ ²⁷	Discussion of Visibility Threshold Selection Methodology and Affected Facilities in Louisiana	Arkansas DEQ shared its methodology for what sources to pull forward for four-factor analysis as contributing to Arkansas Class I areas and preview of anticipated asks	Interstate Consultation
March 3, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ²⁸	Planning Period II progress and updates	Regional timeline with state specific approaches – individual state status; Progress on source ID for 4-factor analysis; Consultation plan progress; VISTAS sharing modeling protocol with CenSARA states	CenSARA and VISTAS States and Federal Partners Communication
April 6, 2020	Web-Conference	Texas CEQ ²⁹ Arkansas DEQ ³⁰	Texas source selection methodology	Discussion of sources Texas planned to request four-factor analyses from	Interstate Consultation

²⁶ Treece, Clark, Hossan, Jobe, Droke

²⁷ Montgomery, Treece, Clark, Hossan, Jobe, Droke

²⁸ Arkansas (Clark, Droke, Hosan, Jobe, Day, Treece, Montgomery); Iowa (Johnson, Fizel); Kansas (Deahl); Louisiana (Brown, Ducote); Missouri (Alsharafi, Wilbur, Dindarloo); Nebraska (Hardesty, Wharton); Oklahoma (Kirlin, Garbe); Texas (Gifford, Galvan, Mellberg, Earnest, Williamson); U.S. Environmental Protection Agency (EPA) (Medina, Huser, Wolkins, J. Ashley); Federal Land Managers (FLM) NPS – Peters, FS – McNeel, Pitrolo, Ash); Other (Hornback - VISTAS, Martin- AL)

²⁹ Walker Williamson; Tonya Baer; Laurie Barker; Steven Hagood; Donna Huff; Vincent Meiller; John Minter; Amy Browning; Margaret Earnest; Stephanie Shirley; Bob Gifford; Jocelyn Mellberg; Javier Galvan; Danielle Nesvacil; Kristin Jacobsen; Guy Hoffman; Daphne McMurrer; Jill Dickey; Adena Whitton; Kathe Boothby

³⁰ Treece

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
April 7, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³¹	Planning Period II progress and updates	States' progress on 4-factor ID, consultation plans, facility notification (ICRs); IMPROVE dataset discussion (2017 or 2019); EPA R6 is proposing to discuss the FLM consultation requirements with OAQPS and OGC and then come back to talk to the states	CenSARA and VISTAS States and Federal Partners Communication
April 13, 2020	Email	From TX CEQ to AR DEQ	Q/d results	TX sent AR information for Caney Creek and Upper Buffalo	Interstate Consultation
April 13, 2020	Email	From EPA (Feldman)	Source selection recommendations/revising emissions for select sources	EPA suggested revising the emissions for Sandow, Big Brown, and Monticello in Texas and for Sooner and Muskogee in Oklahoma	Federal (EPA) Consultation
April 15, 2020	Web-Conference	AR, LA, OK RH Discussion ³²	EPA R6 feedback on source selection methodology	States discussed EPA feedback and discussed technical basis for adjustments, if any to source selection methodology	Interstate Consultation
April 20, 2020	Webinar	States & EPA	Ask CAMD Session on CAMD Data Products	CAMD presentation & demonstration of tools useful in RH planning	--

³¹ Arkansas (Clark, Droke, Hossan, Treece); Iowa (Johnson, McIntyre); Kansas (Deahl); Louisiana (Hayes, Aucoin, Brown, Petersen); Missouri (Leath, Wilbur); Nebraska (Wharton); Oklahoma (Botchlet-Smith, Kirlin, Garbe, Petre, Miller, Foster); Texas (Gifford, Jacobson, Dickey, Mellberg, Hoffman, Earnest, Williamson, Shirley); U.S. Environmental Protection Agency (EPA) (Medina, Huser, Wolkins, Avey, Stein, Timin); Federal Land Managers (FLM) NPS – King, Peters; FS – Anderson, Sams, Ash, Deal, Pitrolo, McNeel); FWS – Allen; Tribal –(Hathcoat, Allison Gienapp); Other (Hornback - VISTAS, Bacon, Martin- AL; Read -FL; Kim, Boylan-GA; Poff-KY; Bickerstaff-MS; Tardiff, Heather Wiley-NC

³² Delveccio Brown; Montgomery, William; Clark, David; Cooper, Garbe; Thomas Richardson; Jason Meyers; Vennetta Hayes; Melanie Foster; Brooks Kirlin; Kelly Petersen; Treece, Tricia

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
April 21, 2020	Webinar	VISTAS & MJOs states	VISTAS Modeling Results to MJOs and States	VISTAS presentation	--
May 5, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7	Planning Period II progress and updates	Status report from states of progress on SIP development and FLM and EPA updates	CenSARA and VISTAS States and Federal Partners Communication
May 7, 2020	Email	FS, FWS, NPS and Arkansas DEQ	Notification of Data Availability	ICR Responses shared; requested input for upcoming 4-factor analyses https://www.adeg.state.ar.us/air/planning/sip/regional-haze.aspx	FLM Consultation
May 8, 2020	Email	OK DEQ, MO DNR, and Arkansas DEQ	Notification of Data Availability	ICR Responses shared; requested input for upcoming 4-factor analyses https://www.adeg.state.ar.us/air/planning/sip/regional-haze.aspx	Interstate Consultation
May 19-20, 2020	Webinar	WESTAR-WRAP & MJOs states	WRAP Modeling Results	Monitoring (May 19) and Emissions (May 20) data and display tools	--
May 20, 2020	Webinar	VISTAS & MJOs states	VISTAS regional haze stakeholder briefing	revised glidepaths showing progress in five Class I areas outside but near the VISTAS region; expected “asks”	--
June 1, 2020	Email	North Dakota DEQ and Arkansas DEQ	Planning Period I: BART cost analysis	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
June 2, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³³	Planning Period II progress and updates	States discussed EPA feedback and discussed technical basis for adjustments, if any, to source selection methodology	CenSARA and VISTAS States and Federal Partners Communication
June 2, 2020	Email	Idaho DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 2, 2020	Email	Indiana DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 2, 2020	Email	Louisiana DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 2, 2020	Email	Nebraska DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 3, 2020	Email	Minnesota DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 3, 2020	Email	New Hampshire and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 3, 2020	Email	Wisconsin and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 4, 2020	Email	Montana DEQ and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 4, 2020	Email	New Mexico ED and Arkansas DEQ	Planning Period I: controls costs	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 8, 2020	Web-Conference and Email follow-up	New Mexico ED ³⁴ Arkansas DEQ ³⁵	Discussion of Useful RH Tools for PPII	Costs/Source BART Analysis (AR); WRAP Tools (NM)	Interstate Consultation

³³ Arkansas – Clark, Droke, Hossan, Jobe, Treece; Iowa – Johnson, McIntyre; Kansas – Deahl; Louisiana - Babin, Aucoin, Brown, Petersen; Missouri – Wilbur, Alsharafi, Dindarloo; Nebraska – Wharton; Oklahoma – Kirlin, Garbe, Richardson; Texas – Gifford, Galvan, Mellberg, Hoffman, Earnest, Williamson, Shirley; U.S. Environmental Protection Agency (EPA) – Medina, Huser, Wolkins, Timin; Federal Land Managers (FLM): NPS – Stacey, Pohlman, Shepherd, King, Peters, Miller; FS – Ash, Sams, McNeel, Sorkin; FWS – Allen; Tribal –Hathcoat, Gienap; Other (Martin- AL; Bickerstaff-MS; Tardif-NC)

³⁴ Jones

³⁵ Treece

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
June 12, 2020	Email	Iowa DNR, Nebraska DEE, Arkansas DEQ	Discussion of 4-factor analysis methodology	Shared resources	Interstate Consultation
June 12, 2020	Email	Texas CEQ and Arkansas DEQ	Planning Period I: BART cost analysis	Compilation of Planning Period I Costs Spreadsheet	Interstate Consultation
June 19, 2020	Email	Louisiana and Arkansas DEQ	Facility ICR Request	Dolet Hills, LA ICR info shared with AR (ICR dated May 15, 2020)	Interstate Consultation
June 22, 2020	Email “Ask” Letter Received	VISTAS on behalf of North Carolina, to Arkansas	Request for Regional Haze Reasonable Progress Analysis for Arkansas Source Impacting VISTAS Class I Area	Entergy Arkansas Inc-Independence Plant (05063-1083411), for Shining Rock Wilderness Class I area	Interstate Consultation
June 22, 2020	Email	NPS and Arkansas DEQ	RH Timeline for Arkansas	Currently drafting four-factor analyses	FLM Consultation
June 23, 2020	Conference Call	FutureFuel (PPII possible source) and Arkansas DEQ	Discussion of RH analyses, possible paths forward for PPII	Next steps/timelines	Stakeholder Engagement
June 23, 2020	Webinar	WESTAR-WRAP & MJOs states	WRAP Modeling Results	TSS Orientation; Recap / progress on Monitoring and Emissions Data display tools for Regional Haze plans; Modeling and Visibility Projections results access and display topics for weight of evidence	https://www.wrapair2.org/calendar/viewitem.jsp?&cal_item_id=31183
June 25, 2020	Webinar	WESTAR-WRAP & MJOs states	WRAP Modeling Results	Modeling Results and Applications presentations – methodology and “how-to-use;” Next steps on modeling results delivery and continuing updates to TSS	https://www.wrapair2.org/calendar/viewitem.jsp?&cal_item_id=32183

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
June 25, 2020	Conference Call	EPA R6 and Arkansas DEQ	Discussion of information collection request responses	Identification of needs for additional development and/or clarification with respect to information about evaluated technologies	Federal (EPA) Consultation
July 7, 2020	Email	Arkansas DEQ to North Carolina DEQ, VISTAS, SESARM	Notice of Data Availability for Independence	ICR Responses shared; requested input for upcoming 4-factor analyses	Interstate Consultation
July 14, 2020	Conference Call	TX CEQ and AR DEQ	TCEQ's selection of sources for four-factor analysis, modeling results, etc.	Update to the April 6, 2020 consultation call hosted by the TCEQ	Interstate Consultation
July 16, 2020	Email	Dayana Medina--EPA R6 and AR DEQ	RH Four-factor Analysis: Interest Rates	Followup by EPA on R6 State inquiry about interest rates	Federal (EPA) Consultation
July 17, 2020	Email/Letter	Oklahoma DEQ to Arkansas DEQ	"Ask" Letter	Oklahoma requests that Arkansas consider two sources for further analysis (White Bluff & Independence)	Interstate Consultation
July 21, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³⁶	Planning Period II progress and updates	States completing source selection, ICRs, and reaching out to other states for info	CenSARA and VISTAS States and Federal Partners Communication
July 22, 2020	Email	Texas CEQ and AR DEQ	TX request for copy of AR source selection presentation	AR sent updated presentation	Interstate Consultation

³⁶ Arkansas: Clark, Droke, Hossan, Day, Treece; Iowa -Johnson, McIntyre; Kansas: Deahl; Louisiana - Babin, Aucoin, Brown, Ducote, Hayes; Missouri: Wilbur, Alsharafi, Dindarloo, Leath, Johnson; Nebraska: Wharton; Oklahoma: Kirlin, Garbe, Richardson, Petre, Foster; Texas: Gifford, Galvan, Dickey, Mellberg, Williamson, Shirley. U.S. Environmental Protection Agency (EPA): R6 - Huser, Snyder, Donaldson; R7 – Wolkins; OAQPS - Federal Land Managers (FLM): NPS - Shepherd, King, Peters, Miller; FS - Ash, Sams, Pitrolo, Copeland; FWS - Allen. Other (Hornback, Bacon, Martin-AL; Bickerstaff-MS; Tardif-NC, Read, Ashley Collins-FL, Boylan-GA, Poff-KY)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
August 3, 2020	Email	Missouri DNR and Arkansas DEQ	MO request for RP analysis for Arkansas sources	Met via conference call to discuss visibility impact at Mingo and Hercules Glades	Interstate Consultation
August 4, 2020	Webinar	VISTAS agencies, EPA, FLMs, RPOs and surrounding states	2028 Regional Haze Modeling Results	Provide update on regional haze modeling conducted by VISTAS. DEQ obtained modeling results to include in SIP narrative and RPG analyses	CenSARA and VISTAS States and Federal Partners Communication
August 6, 2020	Conference Call	TCEQ and Arkansas DEQ	Consultation on Texas proposed plan	Texas communicated their planned recommendations for their Commission	Interstate Consultation
August 6, 2020	Conference Call/Email follow up	Missouri DNR and Arkansas DEQ	“Asks” from Missouri DNR	Missouri requested DEQ perform 4-factor analysis for certain sources in Arkansas	Interstate Consultation
August 25, 2020	Conference Call	Domtar and Arkansas DEQ	Follow-Up on Regional Haze 4-Factor Analysis	DEQ explained proposed decision based on 4-factor analysis	Stakeholder Engagement
August 25, 2020	Conference Call	FutureFuel and Arkansas DEQ	Follow-Up on Regional Haze 4-Factor Analysis	DEQ explained proposed decision based on 4-factor analysis	Stakeholder Engagement
August 26, 2020	Conference Call	SWEPCO and Arkansas DEQ	Follow-Up on Regional Haze 4-Factor Analysis	DEQ explained proposed decision based on 4-factor analysis	Stakeholder Engagement
September 1, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³⁷	Planning Period II progress and updates	States are drafting SIPs, finalizing ICR analysis, reaching out to other states for info	CenSARA and VISTAS States and Federal Partners Communication

³⁷ Arkansas: Clark, Droke, Hossan, Day, Treece; Iowa: Johnson, McIntyre; Kansas: Deahl; Louisiana: Babin, Aucoin, Brown, Ducote, Hayes; Missouri: Wilbur, Alsharafi, Dindarloo, Leath, Johnson; Nebraska: Wharton; Oklahoma: Kirlin, Garbe, Richardson, Petre, Foster; Texas: Gifford, Galvan, Dickey, Mellberg, Williamson, Shirley. U.S. Environmental Protection Agency (EPA): R6 - Huser, Snyder, Donaldson; R7 - Wolkins. Federal Land Managers (FLM): NPS - Shepherd, King, Peters, Miller; FS - Ash, Sams, Pitrolo, Copeland; FWS - Allen. Other (Hornback, Bacon, Martin- AL; Bickerstaff-MS; Tardif-NC, Read, Ashley Collins-FL, Boylan-GA, Poff-KY)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
September 4, 2020	Email	OK DEQ to AR DEQ	Western Farmers Hugo draft 4-factor analysis provided to AR	--	Interstate Consultation
September 8, 2020	Conference Call	FutureFuel and Arkansas DEQ	Follow-Up on Regional Haze 4-Factor Analysis	Discussion of Baseline Boiler Operations Data	Stakeholder Engagement
September 11, 2020	Conference Call	FutureFuel and Arkansas DEQ	Follow-Up on Regional Haze 4-Factor Analysis	Discussion of Baseline Boiler Operations Data	Stakeholder Engagement
September 11, 2020	Letter	Missouri DNR and Arkansas DEQ	Formal “Asks” for sources impacting Missouri Class I areas	Request for 4-factor Analysis	Interstate Consultation
September 18, 2020	Email	TCEQ and Arkansas DEQ	Notification of Availability of TX SIP Proposal Documents	--	Interstate Consultation
October 6, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³⁸	Planning Period II progress and updates	Some states beginning EPA, FLM, and/or Public review stages; Others wrapping up consultations (with facilities and/or other entities)	CenSARA and VISTAS States and Federal Partners Communication
November 3, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ³⁹	Planning Period II progress and updates	Some states beginning EPA, FLM, and/or Public review stages; Others wrapping up consultations (with facilities and/or other entities)	CenSARA and VISTAS States and Federal Partners Communication

³⁸ Arkansas: Clark, Hossan; Iowa: Johnson, McIntyre; Kansas: Deahl; Louisiana: Aucoin, Petersen, Hayes; Missouri: Wilbur, Leath, Alsharafi, Basham; Nebraska: Wharton; Oklahoma: Garbe, Richardson; Texas: Gifford, Hoffman, Galvan, Mellberg, Earnest, Williamson, Shirley. U.S. Environmental Protection Agency (EPA): R6 – Huser; R7 – Wolkins, Keas; Federal Land Managers (FLM): NPS – Pohlman, Miller, Shepherd; FS – Sams, Deal, Ash, McNeel; FWS – Allen. Tribal – Hathcoat, Kriebs, Gorsuch. Other (Bacon, Martin-AL; Bickerstaff-MS; Ashley Kung-FL; Boylan-GA, Poff-KY)

³⁹ Arkansas: Clark, Hossan, Droke, Day, Jobe, Treece; Iowa: Johnson, McIntyre; Kansas: Deahl; Louisiana: (State Holiday); Missouri: Johnson, Leath, Alsharafi, Basham; Nebraska: Wharton; Oklahoma: Garbe, Richardson, Kirlin; Texas: Dickey, Galvan, Mellberg, Earnest, Williamson. U.S. Environmental Protection Agency (EPA): R6 – Huser, Snyder, Medina; R7 – Wolkins; OAQPS – Timin. Federal Land Managers (FLM): NPS – Pohlman, Stacey, Miller, Shepherd, Peters; FS – Deal, Ash, McNeel; FWS – Allen. Tribal – Kriebs, Gorsuch. Other (Bickerstaff-MS; Tardiff-NC; Spraley-GA)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
December 1, 2020	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴⁰	Planning Period II progress and updates	Some states beginning EPA, FLM, and/or Public review stages; Others wrapping up consultations (with facilities and/or other entities)	CenSARA and VISTAS States and Federal Partners Communication
January 5, 2021	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴¹	Planning Period II progress and updates	Some states beginning four-factor analyses; Others reaching out to other states for consultation	CenSARA and VISTAS States and Federal Partners Communication
February 5, 2021	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴²	Planning Period II progress and updates	Some states beginning EPA, FLM, and/or Public review stages; Some states beginning four-factor analyses; Others reaching out to other states for consultation	CenSARA and VISTAS States and Federal Partners Communication

⁴⁰ Arkansas: Clark, Hossan; Iowa: Johnson, McIntyre; Kansas: Deahl; Louisiana: Aucoin, Petersen, Hayes; Missouri: Wilbur, Leath, Alsharafi, Basham; Nebraska: Wharton; Oklahoma: Garbe, Richardson; Texas: Gifford, Hoffman, Galvan, Mellberg, Earnest, Williamson, Shirley. U.S. Environmental Protection Agency (EPA): R6 – Huser; R7 – Wolkins, Keas. Federal Land Managers (FLM): NPS – Pohlman, Miller, Shepherd; FS –Sams, Deal, Ash, McNeel; FWS – Allen. Tribal – Hathcoat, Kriebs, Gorsuch. Other (Bacon, Martin- AL; Bickerstaff-MS; Ashley Kung–FL; Boylan-GA, Poff-KY)

⁴¹ Arkansas – Erika Droke, Iqbal Hossan, Kelly Jobe, Tricia Treece; Iowa – Matthew Johnson, Jessica Reece-McIntyre, Catharine Fitzsimmons; Kansas – Lynn Deahl; Louisiana – John Babin, Kelly Petersen, Maureen Ducote, Vennetta Hayes; Missouri –Mark Leath; Nebraska – Shelley Schneider, Tracy Wharton; Oklahoma – Cooper Garbe, Brooks Kirlin, Melanie Foster; Texas – Javier Galvan, Bob Gifford, Jocelyn Melburg, Stephanie Shirley; R6 – Dayana Medina, Jennifer Huser, Erik Snyder; R7 -Jed Wolkins; NPS – Don Shepherd, Debbie Miller, Kirsten King, Melanie Peters; FS – Jeremy Ash, Bret Anderson, Chuck Sams, Jacob Deal, Jeff Sorkin, Pleas McNeel; FWS – Tim Allen; Tribal – Kelly Schott, April Hathcoat, Joleen Thiele; Others – Chad LaFontaine, Ashley Kung (FL), Tim Martin (AL), Byeong Kim (GA)

⁴² Arkansas – David Clark, Iqbal Hossan, Kelly Jobe, Tricia Treece; Iowa – Matthew Johnson, Jessica Reece-McIntyre; Kansas – Lynn Deahl, Doug Watson; Louisiana – John Babin, Vennetta Hayes, Vivian Johnson; Missouri –Mark Leath, Adel Alsharafi; Nebraska – Shelley Schneider, Tracy Wharton, Kurt Lyons; Oklahoma – Cooper Garbe, Tom Richardson; Texas – Javier Galvan, Bob Gifford, Jocelyn Mellburg, Margaret Earnest, Walker Williamson, Stephanie Shirley; R6 – Dayana Medina, Jennifer Huser; R7 -Jed Wolkins; OAQPS – Brian Timin, Joe Stein; NPS – David Pohlman, Don Shepherd, Debbie Miller, Kirsten King, Melanie Peters; FS – Jeremy Ash, Chuck Sams, Jacob Deal, Melanie Pitrolo, Pleas McNeel; FWS – Tim Allen; Tribal – Miami Nation; Others – Ashley Kung (FL), Tim Martin (AL), Byeong Kim, Jim Boylan (GA)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
March 1, 2021	Letter/email	Arkansas letter to FLMs and affected states, email to EPA	Arkansas Pre-proposal Draft SIP for 60-day review	60-day review period: March 1, 2021 through April 30, 2021	FLM Consultation Interstate Consultation Federal Partners Consultation
March 2, 2021	Email	FWS, EPA, MO, TX, NC to AR	Confirmation Pre-Proposal Draft SIP received	60-day review period: March 1, 2021 through April 30, 2021	FLM Consultation Interstate Consultation Federal Partners Consultation
March 2, 2021	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴³	Planning Period II progress and updates	Some states revising four-factor analyses based on feedback; modeling reviews; consultations between states and FLMs	CenSARA and VISTAS States and Federal Partners Communication
March 11, 2021	Email	Arkansas follow-up to FLMs and affected states, EPA	Update: finalized consent decree for Entergy	Shared link to final decision	FLM Consultation Interstate Consultation
March 12, 2021	Letter	TX CEQ and AR DEQ	Comment letter for Arkansas Pre-proposal Draft SIP review	60-day review by States	Interstate Consultation
April 7, 2021	Email	From Kentucky to Arkansas	Updated draft Shawnee 4-factor analysis	Arkansas received draft 4-factor analysis for the TVA-Shawnee plant	Interstate Consultation

⁴³ Arkansas – David Clark, Kelly Jobe; Iowa – Matthew Johnson, Jessica Reece-McIntyre; Kansas – Lynn Deahl; Louisiana – John Babin, Vennetta Hayes; Missouri – Mark Leath, Adel Alsharafi; Nebraska – Tracy Wharton; Oklahoma – Cooper Garbe, Tom Richardson, Brooks Kirlin; Texas – Jocelyn Mellberg, Margaret Earnest, Stephanie Shirley, Walker Williamson; R6 – Dayana Medina, Jennifer Huser; OAQPS – Brian Timin, Joe Stein; NPS – David Pohlman, Don Shepherd, Debbie Miller, Kirsten King, Melanie Peters; FWS – Tim Allen; Tribal – April Hathcoat; Others – Tim Martin (AL), Byeong Kim (GA)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
April 12, 2021	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴⁴	Planning Period II progress and updates	Some states negotiating with sources; others have draft SIPs ready; consultations between states and FLMs ongoing	CenSARA and VISTAS States and Federal Partners Communication
April 26, 2021	Email	NC DEQ to AR DEQ	Reviewed draft SIP and Independence Control Strategies	No comments on drafted documents	Interstate Consultation
April 30, 2021	Email/Letter	Forest Service and Arkansas DEQ	Comment letter for Arkansas Pre-proposal Draft SIP review	60-day review by FLM	FLM Consultation
May 3, 2021	Email/Letter	EPA and Arkansas DEQ	Comment letter for Arkansas Pre-proposal Draft SIP Review	60-day review by EPA	EPA Consultation
June 1, 2021	Conference Call	CenSARA States, VISTAS States, Tribal Entities, Federal Land Managers, and EPA Region Offices 6 and 7 ⁴⁵	Planning Period II progress and updates	Some states considering feedback from 60 day consultation reviews; some reporting SIP will be late; some public noticing Draft SIPs	CenSARA and VISTAS States and Federal Partners Communication
June 10, 2021	Email	TX to CenSARA states	SIP Proposal available for public review (currently before their Commission)	TX Consult to neighbor states, affected states review period running concurrent with public review period	Interstate Consultation

⁴⁴ Arkansas – David Clark, Kelly Jobe, Iqbal Hossan, Erika Droke; Iowa – Matthew Johnson, Jessica Reece-McIntyre; Kansas – Lynn Deahl; Louisiana – John Babin, Vivian Johnson; Missouri – Mark Leath, Adel Alsharafi, Aaron Basham; Nebraska – Tracy Wharton, Kurt Lyons; Oklahoma – Cooper Garbe, Tom Richardson, Brooks Kirlin, Madison Miller, Melanie Foster; Texas – Bob Gifford, Javier Galvan, Jocelyn Mellberg, Stephanie Shirley, Walker Williamson; R6 – Dayana Medina, Jennifer Huser, Erik Snyder; R7 – Jed Wolkins; NPS – Melanie Peters; FS – Bret Anderson, Jeremy Ash, Pleas McNeel; FWS – Tim Allen; Others – Tim Martin (AL)

⁴⁵ Arkansas (Clark); Iowa (Johnson, Reece-McIntyre); Kansas (Deahl); Louisiana (Hayes, Aucoin, Dalton); Missouri (Leath, Alsharafi, Basham); Nebraska (Wharton); Oklahoma (Kirlin, Garbe, Richardson); Texas (Galvan, Mellberg, Earnest, Williamson, Shirley, Meiler); EPA (Medina, Huser, Wolkins, Stein, Timin); NPS – Stacey, Miller, King; FS – Ash, Deal, McNeel; FWS – Allen; Tribal (Hathcoat, Martin); Other (Lafontaine – VISTAS, Martin – AL; Kim-GA; Bickerstaff-MS)

Date	Method	Entities Involved	Topic/Problem/	Outcome	Notes/Links
June 11, 2021	Email	Arkansas DEQ to KY, MO, and OK	CAMX modeling: data confirmation of specific sources	AR gathering additional data for modeling run	Interstate Consultation
June 15, 2021	Email	MO to AR	MO Response to AR DEQ June 11, 2021 Email	Updated information shared with AR DEQ	Interstate Consultation
June 15, 2021	Email	OK to AR	OK Response to AR DEQ June 11, 2021 Email	Updated information shared with AR DEQ	Interstate Consultation
June 16, 2021	Email	KY to AR	KY Response to AR DEQ June 11, 2021 Email	Updated information shared with AR DEQ	Interstate Consultation
July 23, 2021	Email	AR to LA (and response)	LA Response to AR DEQ July 23, 2021 Email	Updated information shared with AR DEQ	Interstate Consultation
July 30, 2021	Email/Letter	MO to AR	MO Formal Consultation with AR, pre-publication draft SIP for 60-day review	Respond with comments by September 28, 2021	Interstate Consultation
September 29, 2021 - September 30, 2021	Email	Consultation between AR and AL, KY, MO, NC, and OK	Planning for adjusted/unadjusted 2028 URP Value	DEQ reached out to neighbor states regarding their plans for using the unadjusted or adjusted URP value for 2028	Interstate Consultation
December 22, 2021/ January 5, 2022	Letter/Email	IN response to AR consultation	Formal Consultation	Indiana response to AR February 2, 2020 and March 1, 2021 invitation to review pre-proposal draft RH SIPs and to consider reviewing certain IN sources' impacts on Upper Buffalo	Interstate Consultation



APPENDIX D-3

Consultation and Coordination Resources, Policies, and Procedures

Division of Environmental Quality
Office of Air Quality

APPENDIX D-3: CONSULTATION & COORDINATION RESOURCES, POLICIES, AND PROCEDURES

This appendix provides a list of resources related to consultation and coordination with federal and tribal partners, including existing policies and protocols amongst key agencies. The list below contains references to external documents.

Policies & Protocols for Consultation with Federal Land Managers

- Department of Interior Tribal Consultation Policy
<https://www.doi.gov/tribes/Tribal-Consultation-Policy>
- National Park Service Consultation
<https://www.nps.gov/history/howto/patoolkit/consult.htm>
- U.S. Fish and Wildlife Service: Tribal Consultation Handbook, February 2018
<https://www.fws.gov/TCG.pdf>
- U.S. Fish and Wildlife Service: Native American Programs
<https://www.fws.gov/nativeamerican/>
- U.S. Fish and Wildlife Service: Native American Policy, January 20, 2016
<https://www.fws.gov/nativeamerican/pdf/Policy-revised-2016.pdf>
- Bureau of Land Management, Tribal Consultation
<https://www.blm.gov/services/tribal-consultation>
- U.S. Forest Service, Tribal Relations
 - <https://www.fs.fed.us/spf/tribalrelations/>
 - <https://www.fs.fed.us/working-with-us/tribal-relations>

Policies & Protocols for Consultation and Coordination with Tribal Governments

Resources for better understanding Federal Agency consultation and coordination with Tribal Governments:

EPA Headquarters Consultation Procedures

- EPA Resources on Consultation and Coordination with Tribes
<https://www.epa.gov/tribal/forms/consultation-and-coordination-tribes>
- EPA Policy on Consultation and Coordination with Indian Tribes, May 4, 2011
<https://www.epa.gov/sites/production/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf>
- EPA Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights, February 2016
https://www.epa.gov/sites/production/files/2016-02/documents/tribal_treaty_rights_guidance_for_discussing_tribal_treaty_rights.pdf
- Executive Order 13175: Consultation and Coordination with Indian Tribal Governments, 65 FR 67249, November 9, 2000

<https://www.epa.gov/laws-regulations/summary-executive-order-13175-consultation-and-coordination-indian-tribal>

- EPA Tribal Consultation Implementation: Frequently Asked Questions, August 2016
https://www.epa.gov/sites/production/files/2016-08/documents/tribal_consultation_implementation_faqs.pdf
- EPA Tribal Consultation at a Glance (infographic)
https://www.epa.gov/sites/production/files/2016-01/documents/epa_tribal_consultation_at_a_glance_infographic.pdf

EPA Regional Office Consultation Procedures

- EPA Regional Office Consultation Procedures
<https://www.epa.gov/tribal/regional-and-headquarters-office-consultation-procedures>
- EPA Region 6 Tribal Consultation Website
<https://www.epa.gov/tribal/region-6-tribal-program#consultation>
- EPA Region 6 Tribal Consultation and Coordination Procedures
<https://www.epa.gov/tribal/tribal-consultation-and-coordination-procedures-epa-region-6>
- EPA Region 6 Consultation and Coordination with Federally Recognized Indian Tribes, May 2015
https://www.epa.gov/sites/production/files/2015-08/documents/r6_epa_tribal_consultation_procedures_final.pdf

Policies & Protocols for Consultation with EPA

- EPA Regional Haze Resources
<https://www.epa.gov/visibility>



APPENDIX D-4

Consultation and Coordination Documentation

Division of Environmental Quality
Office of Air Quality

<input type="checkbox"/>	RH Interstate Discussion: AR and OK	550-172-593	Jan 29, 2020 09:30 AM
<input type="checkbox"/>	RH Interstate Consultation: AR and IN	374-966-986	Jan 13, 2020 11:54 AM
<input type="checkbox"/>	RH Interstate Consultation: AR and IN	374-966-986	Jan 13, 2020 11:53 AM
<input type="checkbox"/>	Regional Haze Discussion: AR Screening Tool	446-233-750	Dec 10, 2019 01:00 PM
<input type="checkbox"/>	Regional Haze Discussion: w/ Texas DEQ	152-146-993	Dec 4, 2019 01:02 PM
<input type="checkbox"/>	Regional Haze Discussion - AR DEQ and MO DNR	825-824-197	Nov 14, 2019 01:10 PM
<input type="checkbox"/>	Regional Haze Discussion - AR DEQ and MO DNR	825-824-197	Nov 14, 2019 12:16 PM

Treece, Tricia

From: Pitrolo, Melanie -FS <melanie.pitrolo@usda.gov>
Sent: Thursday, December 19, 2019 8:55 AM
To: Treece, Tricia; Clark, David; Montgomery, William; Rouse, Mitch; Droke, Erika; Jobe, Kelly
Cc: Wagoner, Norman -FS; Wood, Lori - FS; Mcneel, Pleasant - FS; Ash, Jeremy - FS; Sams, Charles E -FS; Stratton, Dan -FS; Geiser, Linda -FS; Anderson, Bret A -FS; Kirsten King; Don Shepherd; Peters, Melanie; tim_allen@fws.gov
Subject: RE: Arkansas Regional Haze Planning - Federal Land Manager Input

Hi Tricia,

Thanks for your follow-up email. We appreciate your clarification on our misunderstanding of your intent to bring forward White Bluff, Independence, and John W. Turk for a 4-factor analysis. Nevertheless, since additional emission reductions are not likely from those three facilities given their specifics, we still feel it is a useful exercise to apply your methodology to the remaining Arkansas facilities to identify possible additional sources for 4-factor analysis.

Regarding the spreadsheet that we provided, Jeremy Ash did the analysis for the FLMs via coding (as opposed to in Excel), and he would be happy to walk you through the process. He's in the office today through 2:30pm CT but then will be on leave through New Year's.

Melanie



Melanie Pitrolo
Air Quality Specialist
Forest Service
Region 8

p: 828-257-4213
melanie.pitrolo@usda.gov

160 Zillicoa Street
Asheville, NC 28801

www.fs.fed.us



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From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, December 16, 2019 3:27 PM
To: Pitrolo, Melanie -FS <melanie.pitrolo@usda.gov>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>; Rouse,

Mitch <rouse@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>

Cc: Wagoner, Norman -FS <norman.wagoner@usda.gov>; Wood, Lori - FS <Lori.Wood@usda.gov>; Mcneel, Pleasant - FS <pleasant.mcneel@usda.gov>; Ash, Jeremy - FS <jeremy.ash@usda.gov>; Sams, Charles E -FS <charles.sams@usda.gov>; Stratton, Dan -FS <dan.stratton@usda.gov>; Geiser, Linda -FS <linda.geiser@usda.gov>; Anderson, Bret A -FS <bret.a.anderson@usda.gov>; Kirsten King <kirsten_king@nps.gov>; Don Shepherd <don_shepherd@nps.gov>; Peters, Melanie <melanie_peters@nps.gov>; tim_allen@fws.gov

Subject: RE: Arkansas Regional Haze Planning - Federal Land Manager Input

Melanie,

Thank you for your input. We will consider your suggestions. We plan to discuss whether and how to revise our screening method in the coming days based on feedback we received from EPA, other states, and on our call with you last week.

I do have one point of clarification regarding the highlighted statement in your email below. I did not, nor did anyone else at DEQ, indicate on our call that we would be unlikely to pull White Bluff, Independence, and John W. Turk Jr. Power Plant forward for a four factor analysis. What I said is that based on the proposed methodology, we would bring these facilities forward for a four-factor analysis. See slide 22 of the presentation that I gave on our call (attached).

Do you have a version of the spreadsheet that contains the formulas used in your method? What you sent us only shows values.

We do appreciate the input. Please let us know whether you have any further questions or thoughts.

Tricia Treece

SIP/Planning Supervisor

Policy and Planning Branch

Office of Air Quality

Division of Environmental Quality

Arkansas Department of Energy and Environment

501-682-0055

From: Pitrolo, Melanie -FS [<mailto:melanie.pitrolo@usda.gov>]

Sent: Monday, December 16, 2019 1:20 PM

To: Treece, Tricia; Clark, David; Montgomery, William; Rouse, Mitch; Droke, Erika; Jobe, Kelly

Cc: Wagoner, Norman -FS; Wood, Lori - FS; Mcneel, Pleasant - FS; Ash, Jeremy - FS; Sams, Charles E -FS; Stratton, Dan -FS; Geiser, Linda -FS; Anderson, Bret A -FS; Kirsten King; Don Shepherd; Peters, Melanie; tim_allen@fws.gov

Subject: Arkansas Regional Haze Planning - Federal Land Manager Input

Dear Tricia,

Many thanks for the opportunity to engage with AR DEQ on regional haze planning and for the valuable discussion on Tuesday December 10. As discussed on that call, we have further reviewed your methodology and list of sources, and are supplying the attached spreadsheet as a suggested list of sources to consider for 4-factor analyses.

Given the planned closures of the White Bluff and Independence Plants, and the existing controls on the John W. Turk Jr. Power Plant, we re-examined the list of possible sources and cumulative impacts at Class I areas by excluding the emissions from sources. Since you indicated that these facilities are unlikely to be considered for 4-factor analysis, we felt it prudent to explore what facilities are available for additional analysis. We also focused in on those facilities within AR, rather than the multi-state approach, so it is centered on those facilities within your jurisdiction. In brief, we followed a similar methodology to what you used for estimating impacts. Using your Excel workbook ("AR Screening Method - V3.0_11_12_2019.xlsx"), we combined all of the individual Class I-sheets into one, filtered to AR facilities and then for each facility, selected the Class I area with the largest estimated impact (using EWRT*Q/d). Using this dataset of AR facilities, we then re-calculated cumulative sums and percentages to examine which facilities account for the 50% cumulative threshold you selected.

We feel this is a defensible approach, as it largely mirrors the approach you have developed, while directly accounting for those facilities with possible emissions reductions in this planning period. As discussed on the call, we understand you have capacity concerns for undertaking a widespread source selection procedure, however this approach only adds 4 additional facilities to your existing list. It is our hope that this is a reasonable number of facilities to consider.

We have spoken to our colleagues at NPS and they are in agreement with this approach. We look forward to our continued dialogue and collaboration as planning progresses. We welcome any feedback and comments you have on our recommendation.

Melanie



Melanie Pitrolo
Air Quality Specialist

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Treece, Tricia

From: Treece, Tricia
Sent: Friday, December 20, 2019 3:29 PM
To: Johnson, Matthew (matthew.johnson@dnr.iowa.gov)
Cc: Montgomery, William
Subject: FYI-FW: Arkansas Source Screening for Four Factor Analysis for Regional Haze PP2

Forwarding this to you as an FYI because of our previous discussion of screening analysis method inventory year/thresholds.

Happy Holidays!

Tricia Treece

SIP/Planning Supervisor
Policy and Planning Branch
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
501-682-0055

From: Treece, Tricia
Sent: Friday, December 20, 2019 2:22 PM
To: Wagoner, Norman -FS; Wood, Lori - FS; Mcneel, Pleasant - FS; Ash, Jeremy - FS; Sams, Charles E -FS; Stratton, Dan -FS; Geiser, Linda -FS; Anderson, Bret A -FS; Kirsten King; Don Shepherd; Peters, Melanie; tim.allen@fws.gov; 'Pitrolo, Melanie -FS'; 'Medina, Dayana'; Feldman, Michael; Huser, Jennifer; Gallegos, Jacob; Etchells, Elizabeth; Shatas, Angie; Snyder, Erik; Damberg, Rich; Keas, Ashley; Stein, Joseph
Cc: Clark, David; Montgomery, William; Droke, Erika; Jobe, Kelly
Subject: Arkansas Source Screening for Four Factor Analysis for Regional Haze PP2

Greetings,

After consideration of the input we received from EPA, other states, and the FLMs, DEQ has decided to modify our screening method for which sources to pull forward for a four-factor analysis. Specifically, we plan to use the facilityemis.ewrt.qd2016.alltraj dataset instead of the facilityemis.ewrt.qd2028.alltraj dataset from the Ramboll area of influence study performed for the CenSARA states. In addition, we are changing our threshold from fifty percent to seventy percent of cumulative % of AOI Impacts for NOx and SO₂ combined.

This revision brings forward for Arkansas's four-factor analysis the following facilities:

Facilities	Areas Impacted	Major Emissions Source(s)	Existing SO ₂ Controls	Existing NO _x Controls
White Bluff Power Plant	Caney Creek Upper Buffalo Hercules Glades	2 Coal-fired electric generating units	Low Sulfur Coal	Low NO _x Burners with Separated Overfire Air
Independence Power Plant	Upper Buffalo Hercules Glades Mingo Caney Creek	2 Coal-fired electric generating units	Low Sulfur Coal	Low NO _x Burners with Separated Overfire Air
FutureFuel Chemical Co.	Upper Buffalo Hercules Glades	3 Coal-fired boilers	none	none
Domtar A.W. LLC – Ashdown Mill	Caney Creek Wichita Mountains	Power Boiler 2	Venturi scrubbers	Overfire air
		Power Boiler 3	none	Overfire air
		Recover Boiler 2	none	none
		Recovery Boiler 3	none	none
Flint Creek Power Plant	Upper Buffalo Hercules Glades	1 Coal-fired electric generating unit	Novel Integrated Desulfurization (Dry Lime FGD)	Low NO _x Burners with Overfire Air

If you have any questions about this modified approach, you may call William Montgomery at (501-682-0885), David Clark (501-682-0070), or Tricia Treece (501-682-0055).

Wishing you a joyful holiday season and a happy new year!

Tricia Treece

SIP/Planning Supervisor

Policy and Planning Branch

Office of Air Quality

Division of Environmental Quality

Arkansas Department of Energy and Environment

501-682-0055

Treece, Tricia

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:33 AM
To: 'Delveccio Brown'; Vivian Aucoin; Vennetta Hayes; Kelly Petersen; Maureen Ducote; Christine Thurman (DEQ); Jacob Newgard; Jason Meyers; John Babin (DEQ); Bob Gifford (bob.gifford@tceq.texas.gov); 'stephanie.shirley@tceq.texas.gov'; 'kristin.jacobsen@tceq.texas.gov'; 'margaret.earnest@tceq.texas.gov'; 'walker.williamson@tceq.texas.gov'; javier.galvan@tceq.texas.gov; dhuff@tceq.texas.gov; kim.herndon@tceq.texas.gov; Alsharafi, Adel (adel.alsharafi@dnr.mo.gov); 'Leath, Mark'; 'saeid.dindarloo@dnr.mo.gov'; 'emily.wilbur@dnr.mo.gov'; 'lindley.anderson@tceq.texas.gov'
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Arkansas Source Screening for Four Factor Analysis for Regional Haze PP2
Attachments: Source Selection PP2 Methods _2016 AOI Results.pptx

Greetings,

After consideration of the input we received from EPA, other states, and the FLMs, DEQ has decided to modify our screening method for which sources to pull forward for a four-factor analysis. Specifically, we plan to use the facilityemis.ewrt.qd2016.alltraj dataset instead of the facilityemis.ewrt.qd2028.alltraj dataset from the Ramboll area of influence study performed for the CenSARA states. In addition, we are changing our threshold from fifty percent to seventy percent of cumulative % of AOI Impacts for NO_x and SO₂ combined.

This revision brings forward for Arkansas's four-factor analysis the following facilities:

Facilities	Areas Impacted	Major Emissions Source(s)	Existing SO ₂ Controls	Existing NO _x Controls
White Bluff Power Plant	Caney Creek Upper Buffalo Hercules Glades	2 Coal-fired electric generating units	Low Sulfur Coal	Low NO _x Burners with Separated Overfire Air
Independence Power Plant	Upper Buffalo Hercules Glades Mingo Caney Creek	2 Coal-fired electric generating units	Low Sulfur Coal	Low NO _x Burners with Separated Overfire Air
FutureFuel Chemical Co.	Upper Buffalo Hercules Glades	3 Coal-fired boilers	none	none
Domtar A.W. LLC – Ashdown Mill	Caney Creek Wichita Mountains	Power Boiler 2	Venturi scrubbers	Overfire air
		Power Boiler 3	none	Overfire air

		Recover Boiler 2	none	none
		Recovery Boiler 3	none	none
Flint Creek Power Plant	Upper Buffalo Hercules Glades	1 Coal-fired electric generating unit	Novel Integrated Desulfurization (Dry Lime FGD)	Low NOx Burners with Overfire Air

This revision also brings forward a different set of sources in other states impacting Arkansas's Class I areas. The table below compares sources in other states pulled in using the revised methodology as compared to the methodology we previously presented.

2016 (70% Threshold)	2028 (50% Threshold)
Monticello –CLOSED (TX)	Welsh Power Plant (TX)
Martin Lake Electrical (TX)	Ameren Labadie (MO)
Muskogee Generating Station (OK)	Martin Lake Electrical (TX)
Welsh Power Plant (TX)	Pirkey (TX)
Ameren Labadie (MO)	Cleco Dolet Hills (LA)
CLECO Dolet Hills (LA)	Ameren Rush Island (MO)
Ameren Rush Island (MO)	Entergy Nelson Generating Plant (LA)
Big Brown –CLOSED (TX)	
City Utilities of Springfield (MO)	
Grand River Energy (OK)	
TVA –Shawnee (KY)	
Thomas Hill (MO)	
Indiana Michigan Power (IN)	
Duke Energy –Gibson (IN)	
Allen Fossil (TN) CLOSED	
Entergy Nelson Generating Station (LA)	
Prairie State Generating (IL)	
Hugo Generating (OK)	
Pirkey (TX)	
WA Parish (TX)	

The attached PowerPoint is an update to the PowerPoint we shared with the CenSARA states on December 3rd. Slide 23 lists the Class I areas potentially impacted by each source at our threshold.

If you have any questions about this modified approach, you may call William Montgomery at (501-682-0885), David Clark (501-682-0070), or Tricia Treece (501-682-0055).

Wishing you a happy new year!

Tricia Treece

SIP/Planning Supervisor

Policy and Planning Branch

Office of Air Quality

Division of Environmental Quality

Arkansas Department of Energy and Environment

501-682-0055

Treece, Tricia

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:51 AM
To: 'eddie.terril@deq.ok.gov'
Subject: FW: Regional Haze Planning Period 2 Interstate Consultation
Attachments: Source Selection PP2 Methods _2016 AOI Results.pptx

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:49 AM
To: 'eddie.terril@deq.ok.gov'; 'Melanie.foster@deq.ok.gov'; William Garbe (Cooper.Garbe@deq.ok.gov)
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Regional Haze Planning Period 2 Interstate Consultation

Greetings,

I wanted to reach out to you as part of the our Regional Haze Planning Period two interstate consultations. As part of this process, we have identified sources in your state that potentially impact visibility at Arkansas Class I areas. The attached PowerPoint presents an overview of our methodology. We would like to set up a call with you in the as part of our interstate consultation process to discuss our methodology, and which sources we identified. Please let me know what your availability is at your convenience.

Wishing you a happy new year!

Tricia Treece

SIP/Planning Supervisor
Policy and Planning Branch
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
501-682-0055

Treece, Tricia

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:57 AM
To: 'julie.armitage@illinois.gov'
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Regional Haze Planning Period 2 Interstate Consultation
Attachments: Source Selection PP2 Methods _2016 AOI Results.pptx

Greetings,

I wanted to reach out to you as part of the our Regional Haze Planning Period two interstate consultations. As part of this process, we have identified sources in your state that potentially impact visibility at Arkansas Class I areas. The attached PowerPoint presents an overview of our methodology. We would like to set up a call with you in the as part of our interstate consultation process to discuss our methodology, and which sources we identified. Please let me know what your availability is at your convenience.

Wishing you a happy new year!

Tricia Treece

SIP/Planning Supervisor
Policy and Planning Branch
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
501-682-0055

Treece, Tricia

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:59 AM
To: 'sdeloney@idem.IN.gov'
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Regional Haze Planning Period 2 Interstate Consultation
Attachments: Source Selection PP2 Methods _2016 AOI Results.pptx

Greetings,

I wanted to reach out to you as part of the our Regional Haze Planning Period two interstate consultations. As part of this process, we have identified sources in your state that potentially impact visibility at Arkansas Class I areas. The attached PowerPoint presents an overview of our methodology. We would like to set up a call with you in the as part of our interstate consultation process to discuss our methodology, and which sources we identified. Please let me know what your availability is at your convenience.

Wishing you a happy new year!

Tricia Treece

SIP/Planning Supervisor
Policy and Planning Branch
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
501-682-0055

Treece, Tricia

From: Treece, Tricia
Sent: Monday, December 30, 2019 9:56 AM
To: 'kelly.lewis@ky.gov'
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Regional Haze Planning Period 2 Interstate Consultation
Attachments: Source Selection PP2 Methods _2016 AOI Results.pptx

Greetings,

I wanted to reach out to you as part of the our Regional Haze Planning Period two interstate consultations. As part of this process, we have identified sources in your state that potentially impact visibility at Arkansas Class I areas. The attached PowerPoint presents an overview of our methodology. We would like to set up a call with you in the as part of our interstate consultation process to discuss our methodology, and which sources we identified. Please let me know what your availability is at your convenience.

Wishing you a happy new year!

Tricia Treece

SIP/Planning Supervisor
Policy and Planning Branch
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
501-682-0055



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Scott Deloney
Programs Branch Chief
Office of Air Quality
Indiana Department of Environmental Management

Sent Via Electronic Mail

Dear Mr. Deloney:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Indiana Department of Environmental Management (IDEM) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Upper Buffalo wilderness area.

The key pollutants from anthropogenic sources impairing visibility at Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified the following sources in your state that are reasonably anticipated to impact visibility conditions at Upper Buffalo:

- Indiana Michigan Power DBA AEP Rockport

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

- Duke Energy Indiana LLC – Gibson Genera

Therefore, DEQ requests that IDEM consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to IDEM and for DEQ to incorporate emission reductions anticipated from IDEM's long-term strategy affecting Upper Buffalo into DEQ's reasonable progress goals for Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,

A handwritten signature in blue ink, appearing to read "William K. Montgomery", with a stylized flourish at the end.

William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Rory Davis
Air Quality Planning
Illinois EPA

Sent Via Electronic Mail

Dear Mr. Davis:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Illinois EPA (IEPA) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Upper Buffalo wilderness area.

The key pollutants from anthropogenic sources impairing visibility at Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified the following source in your state as reasonably anticipated to impact visibility conditions at Upper Buffalo: Prairie Generating Station

Therefore, DEQ requests that IEPA consider whether performing a four-factor analysis is appropriate for the listed source in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to IEPA and for DEQ to incorporate emission reductions anticipated from IEPA's long-term strategy affecting Upper Buffalo into DEQ's reasonable progress goals for Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,



William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Kelly Lewis
Program Planning Branch Manager
Division for Air Quality
Department of Environmental Quality
Kentucky Energy and Environment Cabinet

Sent Via Electronic Mail

Dear Ms. Lewis:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Kentucky Energy and Environment Cabinet (Kentucky EEC) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Upper Buffalo wilderness area.

The key pollutants from anthropogenic sources impairing visibility at Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

Based on the results of the AOI study, DEQ has identified the following source in your state as reasonably anticipated to impact visibility conditions at Upper Buffalo: Tennessee Valley Authority – Shawnee Fossil Plant

Therefore, DEQ requests that Kentucky EEC consider whether performing a four-factor analysis is appropriate for the listed source in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to Kentucky EEC and for DEQ to incorporate emission reductions anticipated from Kentucky EEC's long-term strategy affecting Upper Buffalo into DEQ's reasonable progress goals for Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,

A handwritten signature in blue ink, appearing to read "William K. Montgomery", with a stylized flourish at the end.

William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Vivian Aucoin
Environmental Scientist Manager
Air Planning and Assessment Division
Louisiana Department of Environmental Quality

Sent Via Electronic Mail

Dear Ms. Aucoin:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Louisiana Department of Environmental Quality (LDEQ) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Caney Creek and Upper Buffalo wilderness areas.

The key pollutants from anthropogenic sources impairing visibility at Caney Creek and Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified sources in your state that are reasonably anticipated to impact visibility conditions at Upper Buffalo, Caney Creek, or both. The table on the next page lists each source and the Class I Area for which the source was identified.

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

Facility	Class I Area
CLECO Power LLC Dolet Hills	Caney Creek, Upper Buffalo
Entergy Louisiana LLC- Roy S Nelson Plant	Caney Creek

Therefore, DEQ requests that LDEQ consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Caney Creek and Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to LDEQ and for DEQ to incorporate emission reductions anticipated from LDEQ's long-term strategy affecting Caney Creek and Upper Buffalo into DEQ's reasonable progress goals Caney Creek and Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,



William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Mark Leath
SIP Unit Chief
Missouri Department of Natural Resources

Sent Via Electronic Mail

Dear Mr. Leath,

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Missouri Department of Natural Resources (Missouri DNR) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Upper Buffalo wilderness area.

The key pollutants from anthropogenic sources impairing visibility at Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified the following sources in your state that are reasonably anticipated to impact visibility conditions at Upper Buffalo:

- Ameren Missouri Labadie Plant
- Ameren Missouri Rush Island Plant

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

- New Madrid Power Plant Marston
- City Utilities of Springfield Missouri John Twitty Energy Center
- Thomas Hill Energy Center Power Division Thomas Hill

Therefore, DEQ requests that Missouri DNR consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to Missouri DNR and for DEQ to incorporate emission reductions anticipated from Missouri DNR's long-term strategy affecting Upper Buffalo into DEQ's reasonable progress goals for Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,



William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Melanie Foster
Rules and Planning Section
Air Quality Division
Oklahoma Department of Environmental Quality

Sent Via Electronic Mail

Dear Ms. Foster:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with Oklahoma Department of Environmental Quality (ODEQ) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Caney Creek and Upper Buffalo wilderness areas.

The key pollutants from anthropogenic sources impairing visibility at Caney Creek and Upper Buffalo are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified sources in your state that are reasonably anticipated to impact visibility conditions at Upper Buffalo, Caney Creek, or both. The table on the next page lists each source and the Class I Area for which the source was identified.

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

Facility	Class I Area
Muskogee Generating Station	Caney Creek, Upper Buffalo
Hugo Generating Station	Caney Creek, Upper Buffalo
Grand River Energy Center	Upper Buffalo

Therefore, DEQ requests that ODEQ consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Caney Creek and Upper Buffalo during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to ODEQ and for DEQ to incorporate emission reductions anticipated from ODEQ's long-term strategy affecting Caney Creek and Upper Buffalo into DEQ's reasonable progress goals for Caney Creek and Upper Buffalo.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,



William K. Montgomery
Interim Associate Director
Office of Air Quality



ARKANSAS ENERGY & ENVIRONMENT

February 4, 2020

Walker Williamson
Air Quality Planning Section Acting Manager
Texas Commission on Environmental Quality

Sent Via Electronic Mail

Dear Mr. Williamson:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), seeks consultation with the Texas Commission on Environmental Quality (TCEQ) to develop a coordinated emission management strategy for Regional Haze State Implementation Plan (SIP) Revisions due on July 31, 2021 as required under 40 CFR 51.308(f)(2)(ii) for Upper Buffalo and Caney Creek wilderness areas.

The key pollutants from anthropogenic sources impairing visibility at Upper Buffalo and Caney Creek are ammonium sulfate and ammonium nitrate.¹ Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO₂) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Arkansas Class I areas in 2028.²

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Arkansas, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the impact of stationary sources of NO_x and SO₂ on each Class I area in the central region of the United States. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DEQ has identified sources in your state that are reasonably anticipated to impact visibility conditions at Upper Buffalo, Caney Creek, or both. The table on the next page lists each source and the Class I Area for which the source was identified.

¹ <http://vista.cira.colostate.edu/Improve/improve-data/>

² <https://www.epa.gov/visibility/visibility-guidance-documents>

Facility	Class I Area
Martin Lake Electrical Station	Caney Creek, Upper Buffalo
AEP Pirkey	Caney Creek, Upper Buffalo
Welsh Power Plant	Caney Creek, Upper Buffalo
WA Parish Electric Generating Station	Caney Creek

Therefore, DEQ requests that TCEQ consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at Upper Buffalo and Caney Creek during the 2021–2028 planning period.

We look forward to working with you on this important effort. We request that you share with DEQ the results of your analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis and your state's long-term strategy early enough in the process for DEQ to provide feedback to TCEQ and for DEQ to incorporate emission reductions anticipated from TCEQ's long-term strategy affecting Upper Buffalo and Caney Creek into DEQ's reasonable progress goals for Upper Buffalo and Caney Creek.

Should you have any questions, please contact Tricia Treece at 501-682-0055 (treecep@adeq.state.ar.us) or David Clark at 501-682-0070 (clarkd@adeq.state.ar.us).

Sincerely,



William K. Montgomery
Interim Associate Director
Office of Air Quality

Treece, Tricia

From: Vivian Aucoin <Vivian.Aucoin@LA.GOV>
Sent: Thursday, February 6, 2020 9:57 AM
To: Treece, Tricia
Cc: Vennetta Hayes; Clark, David; Montgomery, William
Subject: RE: Arkansas DEQ and LA DEQ Consultation on Regional Haze PP2 - 2_4_20 Letter

Tricia,

Thank you for reaching out to us on this very important matter. I have forwarded your letter to my staff for consideration and outreach. I will have my staff set up a conference call to discuss this matter.

LDEQ is committed to the necessary consultation for Regional Haze purposes.

Vivian H. Aucoin

Environmental Scientist Manager
Air Planning and Assessment Division
Office of Environmental Assessment
Louisiana Department of Environmental Quality
Vivian.aucoin@la.gov
225-219-3482

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Wednesday, February 5, 2020 12:54 PM
To: Vivian Aucoin <Vivian.Aucoin@LA.GOV>
Cc: Vennetta Hayes <Vennetta.Hayes@LA.GOV>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>
Subject: Arkansas DEQ and LA DEQ Consultation on Regional Haze PP2 - 2_4_20 Letter

EXTERNAL EMAIL: Please do not click on links or attachments unless you know the content is safe.

Please find attached a letter from the Arkansas Department of Energy and Environment, Division of Environmental Quality, requesting consultation with Louisiana Department of Environmental Quality for Regional Haze Planning Period II.

Tricia Treece | SIP/Planning Supervisor

**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Thursday, February 6, 2020 8:39 AM
To: Treece, Tricia
Cc: Wilbur, Emily; Clark, David; Montgomery, William; Dindarloo, Saeid; Alsharafi, Adel; Maliro, Patricia; Allen, Stacy
Subject: RE: Arkansas DEQ and MO DNR Consultation on Regional Haze PP2 - 2_4_20 Letter

Tricia,

This email is to acknowledge receipt of the letter you sent yesterday in regards to consultation for Missouri's and Arkansas' 2nd round Regional Haze SIPs. We will review the letter and consider your requests as we move forward in developing our 2nd round Regional Haze SIP. We plan to keep Arkansas and other affected states informed as we move along in the process.

Thank you,

Mark Leath, P.E.
SIP Unit Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

Promoting, Protecting and Enjoying our Natural Resources. Learn more at www.dnr.mo.gov.

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Wednesday, February 5, 2020 1:03 PM
To: Leath, Mark <mark.leath@dnr.mo.gov>
Cc: Wilbur, Emily <emily.wilbur@dnr.mo.gov>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>; Dindarloo, Saeid <Saeid.Dindarloo@dnr.mo.gov>; Alsharafi, Adel <adel.alsharafi@dnr.mo.gov>; Maliro, Patricia <patricia.maliro@dnr.mo.gov>; Allen, Stacy <stacy.allen@dnr.mo.gov>
Subject: Arkansas DEQ and MO DNR Consultation on Regional Haze PP2 - 2_4_20 Letter

Please find attached a letter from the Arkansas Department of Energy and Environment, Division of Environmental Quality, requesting consultation with Missouri Department of Natural Resources for Regional Haze Planning Period II.

Tricia Treece | SIP/Planning Supervisor

**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: McCoy, Carol <Carol_McCoy@nps.gov>
Sent: Thursday, February 20, 2020 5:54 PM
To: Montgomery, William
Cc: Rheaume, Thomas; Braun, Heinz; Kimbrough, Demetria; Treece, Tricia; Clark, David; Droke, Erika; Pohlman, David C.; Peters, Melanie; Shepherd, Don; Stacy, Andrea; King, Kirsten L; Vimont, John
Subject: Updated National Park Service Air Contacts
Attachments: NPS-Air-Contacts-Letter_AR.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi William.

The attached letter contains updated NPS air related contacts covering regional haze, PSD permitting and NEPA related projects of mutual interest.

We look forward to continuing to work with you and your staff to advance clean air in units of our National Park System.

Carol

Carol McCoy
Chief, Air Resources Division
National Park Service / Natural Resource Stewardship & Science Directorate
303-969-2096 /cell 303-895-7340



United States Department of the Interior

NATIONAL PARK SERVICE

Air Resources Division

P.O. Box 25287

Denver, CO 80225-0287

IN REPLY REFER TO:

TRANSMITTED VIA ELECTRONIC MAIL - NO HARDCOPY TO FOLLOW

February 20, 2020

Mr. William Montgomery
Interim Associate Director, Office of Air Quality
Arkansas Department of Environmental Quality
North Little Rock, Arkansas

Dear William:

The National Park Service (NPS) Air Resources Division recently had some personnel changes. I am writing to share updated NPS contacts (see list below) for future Regional Haze and other State Implementation Planning efforts as well as Prevention of Significant Deterioration (PSD) permitting. I also have included lead technical air contacts on projects that trigger compliance with the National Environmental Policy Act (NEPA) in the event our staff want to share thoughts on air related matters associated with those projects.

You will see that I have more than one contact listed for each category. We would appreciate it if your office would copy all those listed under the relevant heading to ensure that correspondence (including email) is not missed at my end due to an individual being out of the office. In advance, thank you.

We look forward to continuing engagement with the State of Arkansas on emission reduction efforts that improve air quality and the clarity of views in units of the National Park System. Clean air is an important dimension of the park visitor experience and helps to protect the health of our visitors and employees as well as the health of park ecosystems. Although Arkansas does not have any NPS Class I areas, it is home to several other areas within the National Park System. These special places enhance the attractiveness of Arkansas as a place to live and to recreate. Further, emissions from Arkansas can affect Class I areas in nearby states.

Through the Regional Haze Program, the United States has achieved dramatic reductions in the pollution that causes visibility impairment in Class I areas. While this program has formal coordination requirements, it is our goal to work with you and your staff early and throughout the Regional Haze State Implementation Plan development process. We look forward to discussing the most opportune times for such engagement. This will ensure that together we forge a workable and effective program for advancing clean air in units of the National Park System and the state for the benefit of current and future generations.

Sincerely,

Carol McCoy
Chief, NPS Air Resources Division

cc:

Thomas Rheaume, Heinz Braun, Demetria Kimbrough

NPS Regional Haze Contacts

Name	Phone	Email
David Pohlman	651-293-8448	david_pohlman@nps.gov
Melanie Peters	303-969-2315	melanie_peters@nps.gov
Kirsten King	303-969-2341	kirsten_king@nps.gov

NPS PSD Contacts

Name	Phone	Email
David Pohlman	651-293-8448	david_pohlman@nps.gov
Don Shepherd	303-969-2075	don_shepherd@nps.gov
Kirsten King	303-969-2341	kirsten_king@nps.gov

NPS NEPA Contacts

Name	Phone	Email
David Pohlman	651-293-8448	david_pohlman@nps.gov
Andrea Stacy	303-969-2816	andrea_stacy@nps.gov
Kirsten King	303-969-2341	kirsten_king@nps.gov

bcc:

ARD-DEN: King, McCoy, Vimont, Permit Review Group, and Project File
(N:\ARD\Programs\Reasonable Progress (2nd planning period)\Communication\ContactLettersToStates)

Treece, Tricia

From: Walker Williamson <walker.williamson@tceq.texas.gov>
Sent: Monday, April 13, 2020 3:14 PM
To: Treece, Tricia
Cc: Stephanie Shirley
Subject: Requests from Consultation Call
Attachments: Upper Buffalo_AOI_Maps.pptx

Tricia,

Sorry it took so long to get y'all a response on this. Please see the information below about Q/d for Upper Buffalo and Caney Creek. Also, attached are the area of influence plots for Upper Buffalo.

Let me know if you have any additional questions.

For Upper Buffalo:

RN	Company	Sitename	Sum of UPBU NOx Q/d	Sum of UPBU S Q/d
<u>RN102609724</u>	CABOT NORIT AMERICAS INC	MARSHALL PLANT		0.8038
<u>RN100543115</u>	GRAPHIC PACKAGING INTERNATIONAL LLC	GRAPHIC PACKAGING INTERNATIONAL TEXARKANA MILL		0.1330
<u>RN100219815</u>	EASTMAN CHEMICAL COMPANY	TEXAS OPERATIONS		

For Caney Creek:

RN	Company	Sitename	CACR Nox Q/d	CACR S
<u>RN100213370</u>	SOUTHWESTERN ELECTRIC POWER COMPANY	WELSH POWER PLANT		
<u>RN102583093</u>	LUMINANT GENERATION COMPANY LLC	MARTIN LAKE ELECTRICAL STATION		
<u>RN100214287</u>	SOUTHWESTERN ELECTRIC POWER COMPANY	AEP PIRKEY POWER PLANT		
<u>RN100209287</u>	OXBOW CALCINING LLC	OXBOW CALCINING		
<u>RN100543115</u>	GRAPHIC PACKAGING INTERNATIONAL LLC	GRAPHIC PACKAGING INTERNATIONAL TEXARKANA MILL		13.09

From: Walker Williamson
Sent: Monday, April 6, 2020 3:40 PM
To: Tricia Treece (treecep@adeq.state.ar.us) <treecep@adeq.state.ar.us>
Subject: Presentation

Tricia,

Getting the information on your first question about Upper Buffalo is taking a while and it might be tomorrow before I'm able to get it to you, but I wanted to go ahead and get the presentation to you. I think the information on slides 25 and 26 for Upper Buffalo might answer your second question, but let me know if it doesn't.

Walker

Treece, Tricia

From: Peters, Melanie <Melanie_Peters@nps.gov>
Sent: Thursday, May 7, 2020 4:46 PM
To: Treece, Tricia
Cc: King, Kirsten L; Shepherd, Don; Cheek, Denesia; Miller, Debra C; Stacy, Andrea
Subject: Re: [EXTERNAL] RH PP2 Consultation: Notification of Data Availability

Thank you Tricia!

We appreciate your open communication and look forward to working together throughout the RH SIP development process.

Best,
Melanie

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Thursday, May 7, 2020 3:05 PM
To: Wagoner, Norman -FS <norman.wagoner@usda.gov>; Wood, Lori - FS <Lori.Wood@usda.gov>; Mcneel, Pleasant - FS <pleasant.mcneel@usda.gov>; Ash, Jeremy - FS <jeremy.ash@usda.gov>; Sams, Charles E -FS <charles.sams@usda.gov>; Stratton, Dan -FS <dan.stratton@usda.gov>; Geiser, Linda -FS <linda.geiser@usda.gov>; Anderson, Bret A -FS <bret.a.anderson@usda.gov>; King, Kirsten L <kirsten_king@nps.gov>; Shepherd, Don <Don_Shepherd@nps.gov>; Peters, Melanie <Melanie_Peters@nps.gov>; Allen, Tim <tim_allen@fws.gov>; 'Pitrolo, Melanie -FS' <melanie.pitrolo@usda.gov>
Cc: Montgomery, William <Montgomery@adeq.state.ar.us>; Clark, David <CLARKD@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>
Subject: [EXTERNAL] RH PP2 Consultation: Notification of Data Availability

This email is intended to notify you that we have posted to our website the information collection requests (ICRs) that we sent to sources based on our screening methodology for Planning Period 2 and their responses. We are in the process of evaluating the responses. As part of our consultation process, we are sharing the information we collected with you to allow you to ask DEQ questions or provide input prior to DEQ completing the four factor analyses for selected facilities. Once we have completed preparation of our proposed SIP revision, we will provide the opportunity for consultation on the complete draft in accordance with the requirements of the Regional Haze Rule.

In our ICRs, we asked the permittees to calculate emission reductions on a maximum month emission rate basis. Based on information received, we also intend to evaluate cost-effectiveness on an average emission rate basis based on the baseline period used for each emission unit.

Here is a link to our Regional Haze webpage: <http://www.adeq.state.ar.us/air/planning/sip/regional-haze.aspx>

If you have any questions, we would be happy to set up a call with you.

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality

Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Thursday, May 7, 2020 4:06 PM
To: Wagoner, Norman -FS; Wood, Lori - FS; Mcneel, Pleasant - FS; Ash, Jeremy - FS; Sams, Charles E -FS; Stratton, Dan -FS; Geiser, Linda -FS; Anderson, Bret A -FS; Kirsten King; Don Shepherd; Peters, Melanie; tim_allen@fws.gov; 'Pitrolo, Melanie -FS'
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly
Subject: RH PP2 Consultation: Notification of Data Availability

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Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

From: Treece, Tricia
Sent: Friday, May 8, 2020 7:27 AM
To: Cheryl Bradley; William Garbe; emily.wilbur; eddie.terrell@deq.ok.gov; madison.miller@deq.ok.gov; Mark Leath P. E.; Melanie Foster; Stacy Allen; stephen.hall@dnr.mo.gov; Saeid Dindarloo
Cc: Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly
Subject: RH PP2 Consultation: Notification of Data Availability

This email is intended to notify you that we have posted to our website the information collection requests (ICRs) that we sent to sources based on our screening methodology for Planning Period 2 and their responses. We are in the process of evaluating the responses. As part of our consultation process, we are sharing the information we collected with you to allow you to ask DEQ questions or provide input prior to DEQ completing the four factor analyses for selected facilities.

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If you have any questions, we would be happy to set up a call with you.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Stroh, David E. <deStroh@nd.gov>
Sent: Monday, June 1, 2020 12:17 PM
To: Treece, Tricia
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states
Attachments: Compilation of Costs used for RH PP1_NorthDakota.xlsx

Hello Tricia,

I updated the information for North Dakota in Rows 72-87. Updated information is in **red** text.

Should you have any questions, please let me know.

Regards,
David

David Stroh

Environmental Engineer

701-328-5188 • destroh@nd.gov



918 E. Divide Ave. • Bismarck, ND 58501

From: Stroh, David E. <deStroh@nd.gov>
Sent: Monday, June 1, 2020 10:51 AM
To: molly.birnbaum@alaska.gov; emerta@cabq.gov; Templeton.Ryan@azdeq.gov; christine.suarez-murias@arb.ca.gov; curtis.taipale@state.co.us; michael.madsen@doh.hawaii.gov; Pascale.Warren@deq.idaho.gov; sjaunara@ndep.nv.gov; Mark.Jones@state.nm.us; Stroh, David E. <deStroh@nd.gov>; Orman.Michael@deq.state.or.us; rick.boddicker@state.sd.us; jbaker@utah.gov; jhuy461@ecy.wa.gov; repayne@mt.gov; amber.potts@wyo.gov; cst461@ecy.wa.gov
Cc: tmoore@westar.org; maryuhl@westar.org
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states

Morning all,

See attached spreadsheet and email chain below. Ultimately, Arkansas is looking for states to review the cost-effectiveness (column I) from Regional Haze Round 1 and provide any input for the sources in their state by COB June 3rd. This is a very quick turnaround, if you are able to review and reply with any corrections or comments – that would be great.

You can reply directly to Tricia using the following info:

Tricia Treece | SIP/Planning Supervisor

**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us

Regards,
David

David Stroh

Environmental Engineer

701-328-5188 • destroh@nd.gov



918 E. Divide Ave. • Bismarck, ND 58501

From: Mary Uhl <maryuhl@westar.org>

Sent: Thursday, May 28, 2020 2:26 PM

To: Tom Moore <tmoore@westar.org>; Stroh, David E. <deStroh@nd.gov>; jbaker@utah.gov; 'Amber Potts' <amber.potts@wyo.gov>

Subject: Fw: QC on Compilation of RH Costs Spreadsheet by respective states

CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Mary Uhl, Executive Director

Western States Air Resources Council (WESTAR)

3 Caliente Rd #8

Santa Fe, NM 87508

maryuhl@westar.org

(505) 930-5197

From: Michael Vince <mvince@censara.org>

Sent: Thursday, May 28, 2020 6:09 AM

To: Paul Miller <pmiller@nescalum.org>; John Hornback <hornback@metro4-sesarm.org>; Zac Adelman <adelman@ladco.org>; Mary Uhl <maryuhl@westar.org>; Marc Cone <mccone@marama.org>

Subject: Fw: QC on Compilation of RH Costs Spreadsheet by respective states

Arkansas has asked that I share this with you and requests a very quick turnaround of June 3! Can you please forward on to your state contacts? The Arkansas contact is Tricia Treece and her contact information is below.

Michael Vince, Executive Director
Central States Air Resource Agencies Association (CenSARA)
P.O.Box 617, 707 N. Robinson Ave.
Oklahoma City, OK 73101
405-813-4300 Ext 1 (office)

mvince@censara.org

<http://www.censara.org>

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Tuesday, May 26, 2020 3:31 PM

To: Michael Vince <mvince@censara.org>

Cc: clarkd@adeq.state.ar.us <clarkd@adeq.state.ar.us>; montgomery@adeq.state.ar.us <montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>;

Droke, Erika <droke@adeq.state.ar.us>

Subject: QC on Compilation of RH Costs Spreadsheet by respective states

Michael,

Arkansas has put together the attached spreadsheet of PP1 BART and reasonable progress determination cost-effectiveness values. We would appreciate it if you could share this draft version with the other RPOs to share with their member states. We would like each of the following states to look at the entries for sources in their state and let us know if they have any corrections (particularly with respect to the cost-effectiveness and dollar basis columns) by COB on

Wednesday June 3, 2020:

- AK
- AL
- AR
- AZ
- CO
- GA
- ID
- KS
- KY
- LA
- ME
- MI
- MN
- MT
- ND
- NE
- NH
- NM
- NV
- OK
- SD
- TX
- UT
- WA
- WI
- WY

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Pascale.Warren@deq.idaho.gov
Sent: Tuesday, June 2, 2020 9:04 AM
To: Treece, Tricia
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states
Attachments: Compilation of Costs used for RH PP1.xlsx

Hi Tricia- The info for Idaho is correct. Let us know if you have any other questions.

Thanks,
Pascale

From: Stroh, David E. [mailto:deStroh@nd.gov]
Sent: Monday, June 1, 2020 9:51 AM
To: molly.birnbaum@alaska.gov; emerta@cabq.gov; Templeton.Ryan@azdeq.gov; christine.suarez-murias@arb.ca.gov; curtis.taipale@state.co.us; michael.madsen@doh.hawaii.gov; Pascale Warren; sjaunara@ndep.nv.gov; Mark.Jones@state.nm.us; Stroh, David E.; Orman.Michael@deq.state.or.us; rick.boddicker@state.sd.us; jlbaker@utah.gov; jhuy461@ecy.wa.gov; repayne@mt.gov; amber.potts@wyo.gov; cst461@ecy.wa.gov
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Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us

Regards,
David

David Stroh

Environmental Engineer

701-328-5188 • destroh@nd.gov



918 E. Divide Ave. • Bismarck, ND 58501

From: Mary Uhl <maryuhl@westar.org>

Sent: Thursday, May 28, 2020 2:26 PM

To: Tom Moore <tmoore@westar.org>; Stroh, David E. <deStroh@nd.gov>; jbaker@utah.gov; 'Amber Potts' <amber.potts@wyo.gov>

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Mary Uhl, Executive Director

Western States Air Resources Council (WESTAR)

3 Caliente Rd #8

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(505) 930-5197

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Sent: Thursday, May 28, 2020 6:09 AM

To: Paul Miller <pmiller@nescaum.org>; John Hornback <hornback@metro4-sesarm.org>; Zac Adelman <adelman@ladco.org>; Mary Uhl <maryuhl@westar.org>; Marc Cone <mcone@marama.org>

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Oklahoma City, OK 73101
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From: Treece, Tricia <treecep@adeq.state.ar.us>

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Cc: clarkd@adeq.state.ar.us <clarkd@adeq.state.ar.us>; montgomery@adeq.state.ar.us <montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>;

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- AK
- AL
- AR
- AZ
- CO
- GA
- ID
- KS

- KY
- LA
- ME
- MI
- MN
- MT
- ND
- NE
- NH
- NM
- NV
- OK
- SD
- TX
- UT
- WA
- WI
- WY

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Delveccio Brown <Delveccio.Brown@LA.GOV>
Sent: Tuesday, June 2, 2020 3:02 PM
To: Treece, Tricia
Cc: Kelly Petersen; Vennetta Hayes; Vivian Aucoin
Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Hi Tricia,

Louisiana does not have any corrections.

Thanks,
Delveccio Brown
LDEQ-Air Planning and Assessment
Office: 225.219.3583
Delveccio.Brown@LA.GOV

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Thursday, May 28, 2020 7:22 AM
To: William Garbe (Cooper.Garbe@deq.ok.gov) <Cooper.Garbe@deq.ok.gov>; Delveccio Brown <Delveccio.Brown@LA.GOV>; 'lynn.deahl@ks.gov' <lynn.deahl@ks.gov>; 'walker.williamson@tceq.texas.gov' <walker.williamson@tceq.texas.gov>; 'tracy.wharton@nebraska.gov' <tracy.wharton@nebraska.gov>
Cc: Montgomery, William <Montgomery@adeq.state.ar.us>; Clark, David <CLARKD@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>
Subject: QC on Compilation of RH Costs Spreadsheets by Respective States

EXTERNAL EMAIL: Please do not click on links or attachments unless you know the content is safe.

Arkansas has put together the attached spreadsheet of PP1 BART and reasonable progress determination cost-effectiveness values. We have entries for the following states in CenSARA.

- KS
- LA
- NE
- OK
- TX

Would you please look over the entries for sources in your state and let us know if you have any corrections (particularly with respect to the cost-effectiveness and dollar basis columns) by COB Wednesday June 3, 2020?

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | **Office of Air Quality**
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Wharton, Tracy <tracy.wharton@nebraska.gov>
Sent: Tuesday, June 2, 2020 9:43 AM
To: Treece, Tricia
Subject: Re: QC on Compilation of RH Costs Spreadsheets by Respective States

Tricia,

Good morning - hope your week is going well.

I looked over the spreadsheet and the value noted from the 2011 BART (NE City Station-Unit 1) was the \$/ton for LNB/OFA + SCR. The \$/ton value for LNB/OFA was \$166/ton (FR-p 12779, top of first column). I wasn't sure if you intended to use the \$/ton for the highest level of control evaluated, or the \$/ton for the control measure that was selected.

Hope this is what you were looking for - if you want to discuss, feel free to call on my cell at 402-540-4944.

Thanks!
Tracy

Respectfully,

Tracy Wharton
NAAQS-SIP COORDINATOR
Air Quality Division

Nebraska Department of Environment and Energy
PO Box 98922
Lincoln, NE 68509-8922

Main Office: 402-471-2186
Direct Line: (402) 471-6410

<http://dee.ne.gov>

<http://dee.ne.gov> | [Twitter](#) | [Facebook](#) **** NEW ****

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Thursday, May 28, 2020 7:21 AM

To: William Garbe (Cooper.Garbe@deq.ok.gov) <Cooper.Garbe@deq.ok.gov>; Delveccio Brown (Delveccio.Brown@LA.GOV) <Delveccio.Brown@LA.GOV>; 'lynn.deahl@ks.gov' <lynn.deahl@ks.gov>; 'walker.williamson@tceq.texas.gov' <walker.williamson@tceq.texas.gov>; Wharton, Tracy <tracy.wharton@nebraska.gov>

Cc: Montgomery, William <Montgomery@adeq.state.ar.us>; Clark, David <CLARKD@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>

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Tricia Treece | SIP/Planning Supervisor

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ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Wednesday, June 3, 2020 12:11 PM
To: Droke, Erika
Cc: Treece, Tricia
Subject: RE: QC on Compilation of RH Costs Spreadsheet by respective states

Thank you Erika, that's very helpful!

I took a look and I have no revisions to make for the two Minnesota sources identified in your spreadsheet.

As a minor note, those controls and supporting analyses were evaluated as part of a FIP. This FIP is still working through revisions (EPA and the taconite companies are in the middle of settlement discussions), so EPA may have better information. While I don't expect things to change, if you are particularly concerned about the values from Minnesota, it may be worthwhile to reach out to EPA to see if they have any corrections/revisions.

Let me know if you have any questions.

Thanks again,

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

NOTICE: This email (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This email may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Monday, June 1, 2020 12:15 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: Re: QC on Compilation of RH Costs Spreadsheet by respective states

Hi, Mr. Bouchareb! Thank you for your prompt response to Arkansas DEQ's inquiry.

The cost-per-ton value for Northshore Mining's low-NOx burner was pulled from EPA's proposed FIP rule, Table V-B.12—Projected Annual NOx Emission Reductions: <https://www.federalregister.gov/documents/2012/08/15/2012-19789/approval-and-promulgation-of-implementation-plans-states-of-minnesota-and-michigan-regional-haze>

If you have further questions, or locate cost-effectiveness information that is more accurate for MN's sources, please let me know. Many thanks, again!

Erika Droke

Arkansas DEQ

Office of Air Quality

From: Treece, Tricia
Sent: Monday, June 1, 2020 11:11 AM
To: Droke, Erika
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states

Could you help with Mr. Bouchareb's inquiry?

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS

ENERGY & ENVIRONMENT

From: Bouchareb, Hassan (MPCA) [<mailto:hassan.bouchareb@state.mn.us>]
Sent: Monday, June 1, 2020 11:03 AM
To: Treece, Tricia
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states

Hello Tricia,

I received your request and was hoping you could point me to where you found the cost information within the FIP docket for Northshore Mining. I would like to take a look, but with the short turnaround time and limited time I have available between now and June 3rd it would be very helpful if you could point me to the basis or specific document you used to come up with the cost estimate numbers.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
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From: Donna Kenski <kenski@ladco.org>
Sent: Monday, June 1, 2020 10:39 AM
To: Jonathan Loftus <jonathan.loftus@wisconsin.gov>; Tom Julien <julient@michigan.gov>; Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Subject: Fwd: QC on Compilation of RH Costs Spreadsheet by respective states

This message may be from an external email source.

Arkansas is asking for your quick review of this.

----- Forwarded message -----

From: **Zac Adelman** <adelman@ladco.org>

Date: Thu, May 28, 2020 at 8:38 AM

Subject: Fwd: QC on Compilation of RH Costs Spreadsheet by respective states

To: Donna Kenski <kenski@ladco.org>

Hi Donna

Please share this with the regional haze contacts in MI, MN, and WI. Arkansas DEQ is asking for this back by June 3. It looks like there are only 1-2 facilities in each of these states.

From ADEQ:

Arkansas has put together the attached spreadsheet of PP1 BART and reasonable progress determination cost-effectiveness values. We would appreciate it if you could share this draft version with the other RPOs to share with their member states. We would like each of the following states to look at the entries for sources in their state and let us know if they have any corrections (particularly with respect to the cost-effectiveness and dollar basis columns) by COB on Wednesday June 3, 2020

You can ask the LADCO states, if they respond, to correspond directly with Tricia Treece (treecep@adeq.state.ar.us) from ADEQ.

Best,

Zac Adelman
Lake Michigan Air Directors Consortium
office: 847-720-7880
mobile: 919-302-8471
www.ladco.org

Begin forwarded message:

From: Michael Vince <mvince@censara.org>

Subject: Fw: QC on Compilation of RH Costs Spreadsheet by respective states

Date: May 28, 2020 at 7:09:07 AM CDT

To: Paul Miller <pmiller@nescaum.org>, John Hornback <hornback@metro4-sesarm.org>, Zac Adelman <adelman@ladco.org>, Mary Uhl <maryuhl@westar.org>, Marc Cone <mcone@marama.org>

Arkansas has asked that I share this with you and requests a very quick turnaround of June 3! Can you please forward on to your state contacts? The Arkansas contact is Tricia Treece and her contact information is below.

Michael Vince, Executive Director
Central States Air Resource Agencies Association (CenSARA)
P.O.Box 617, 707 N. Robinson Ave.
Oklahoma City, OK 73101
405-813-4300 Ext 1 (office)

mvince@censara.org
<http://www.censara.org>

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Tuesday, May 26, 2020 3:31 PM

To: Michael Vince <mvince@censara.org>

Cc: clarkd@adeq.state.ar.us <clarkd@adeq.state.ar.us>; montgomery@adeq.state.ar.us <montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>

Subject: QC on Compilation of RH Costs Spreadsheet by respective states

Michael,

Arkansas has put together the attached spreadsheet of PP1 BART and reasonable progress determination cost-effectiveness values. We would appreciate it if you could share this draft version with the other RPOs to share with their member states. We would like each of the following states to look at the entries for sources in their state and let us know if they have any corrections (particularly with respect to the cost-effectiveness and dollar basis columns) by COB on Wednesday June 3, 2020:

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- GA
- ID
- KS
- KY

- LA
- ME
- MI
- MN
- MT
- ND
- NE
- NH
- NM
- NV
- OK
- SD
- TX
- UT
- WA
- WI
- WY

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
 5301 Northshore Drive | North Little Rock, AR 72118
 t: 501.682.0055 | e: treecep@adeq.state.ar.us

--

Donna M. Kenski, Ph.D.
 Lake Michigan Air Directors Consortium
 847-720-7880 (work)
 847-347-3474 (cell)
kenski@ladco.org

Treece, Tricia

From: Baru, Padmaja <Padmaja.Baru@des.nh.gov>
Sent: Wednesday, June 3, 2020 4:27 PM
To: Droke, Erika
Cc: Treece, Tricia; Milbury, Gary; Beahm, Catherine; Moore, Todd
Subject: RE: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH
Attachments: MK Station FGD O&M Costs.xlsx

Hi Erika,

Here's the information that you requested for Merrimack Station's FGD.

FGD installation was required under the NH State Law to control Hg emissions. FGD also removes acid gas emissions from MK1 and MK2 boilers. These boilers exhaust through a common stack.

FGD became operational in September 2011 and was optimized as of 7/1/2013.

Final capital cost of FGD = \$422 million

Assume amortization of capital cost over 15 years at 3% interest rate

Annualized capital cost = $422,000,000 \times \{0.03 / (1 - (1 + 0.03)^{-15})\} = \$35,349,497$

Annual FGD O&M = \$10.5 million

Source: <https://www.eia.gov/electricity/data/eia923/>

(See attached Table for FGD O&M Costs reported by GSP to EIA)

I used the highest reported O&M costs (2018)

MK1 baseline emissions from CY 2002 = 9,754 tons

MK2 baseline emissions from CY 2002 = 20,902 tons

Permit requirement = 94% SO₂ removal ([Permit # TP-0189](#))

SO₂ removed from MK1 & MK2 = 28,817 tons

Total annual cost = \$35,349,497 + \$10,500,000

Average cost = \$1,591/ton SO₂ removed

Please let me know if you need further questions. I apologize for the delay in getting this information to you. It took some effort to chase down the annual O&M costs for the FGD.

Thanks

-Padma

Padmaja Baru

New Construction & Planning Manager

NH DES, Air Resources Division

29 Hazen Drive

P.O. Box 95
Concord, NH 03302-0095
Phone: (603) 271-6798
Fax: (603) 271-7053
e-mail: padmaja.baru@des.nh.gov

-----Original Message-----

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Friday, May 29, 2020 3:44 PM
To: Baru, Padmaja <Padmaja.Baru@des.nh.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: Re: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hi, Padmaja! Thank you for your prompt response to Arkansas DEQ's inquiry!

In the New Hampshire SIP submittal, the cost for the wet FGD installation at MK2 was listed as being unknown, so I tried to supplement cost-effectiveness information with documents that were in the EPA docket. The \$250-\$850 cost per ton came from a technical support document in the NH Regional Haze docket--"Assessment of Reasonable Progress for Regional Haze In MANE-VU Class I Areas: Methodology for Source Selection, Evaluation of Control Options, and Four Factor Analysis--Chapter 2: Source Category Analysis: Electric Generating Units." [https://urldefense.com/v3/https://www.regulations.gov/document?D=EPA-R01-OAR-2008-0599-0030_!!Oai6dtTQULp8Sw!AbRQURByQkwL4DwOBOh5BWNE1rXJ5FTYkkgGsBtXP0Vbjd63jgORas3dGO4-qrHlclZjGg\\$](https://urldefense.com/v3/https://www.regulations.gov/document?D=EPA-R01-OAR-2008-0599-0030_!!Oai6dtTQULp8Sw!AbRQURByQkwL4DwOBOh5BWNE1rXJ5FTYkkgGsBtXP0Vbjd63jgORas3dGO4-qrHlclZjGg$)

In that document, a range of costs is listed for each technology; in Arkansas DEQ's analysis, we defaulted to the high value when a range was presented, so used the \$850 figure for MK2. However, looking at it a second time, I realize that I pulled the dry FGD cost-effectiveness figures, instead of those for wet FGD cost-effectiveness. The range for wet FGD for boilers <1,200 MW that is presented in the support document is \$570-\$5700 per ton of SO2 (page 2--10).

There is an amount of \$1400/ton listed in the NH BART Analysis for MK2 (attached, page 6). I originally did not use this figure because I wasn't sure how the cost-effectiveness analysis accounted for the FGD installation being "split" between the two boiler units (MK1 and MK2), but this may actually be the more accurate figure.

Please let me know if the \$1400 figure is more reasonable than the \$5700 figure, or if you can point me to more specific information for cost-effectiveness of the wet FGD for MK2.

We appreciate your help--many thanks, again!

Erika Droke
Arkansas DEQ, Office of Air Quality

From: Treece, Tricia
Sent: Friday, May 29, 2020 11:46 AM
To: Droke, Erika
Subject: FW: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH

Erika,
Could you respond to her questions. I think you did new Hampshire.

From: Baru, Padmaja [Padmaja.Baru@des.nh.gov]
Sent: Friday, May 29, 2020 9:52 AM
To: Treece, Tricia
Subject: RE: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH

How did you arrive at the \$850/ton cost effectiveness number for MK2 unit in NH?

From: Milbury, Gary <Gary.MilburyJr@des.nh.gov>
Sent: Friday, May 29, 2020 7:29 AM
To: Baru, Padmaja <Padmaja.Baru@des.nh.gov>
Subject: Fw: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH

Good Morning Padma,
Please see the message below. Could you look at the attached spreadsheet and confirm the info. for MK2? The thing we are unsure about is where the cost data came from. If we could verify this info. and get back to AR, that would be a big help.
Thanks!
Gary

From: Paul Miller <pmiller@nescaum.org<<mailto:pmiller@nescaum.org>>>
Sent: Thursday, May 28, 2020 8:45 AM
To: Healy, David; Underhill, Jeff; Wright, Craig; Tom Downs; Jeff Crawford; Eric Kennedy
Cc: Michael Vince
Subject: Request from Arkansas: Quality Check on Compilation of RH Costs Spreadsheet by ME and NH
EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

To ME & NH:

Please see the attached spreadsheet from the State of Arkansas seeking a quality check on info it's compiled from various states for the 1st planning phase BART and reasonable progress determination cost-effectiveness values. ME and NH are among the listed states. The contact in AR seeking your review is Tricia Treece (treecep@adeq.state.ar.us<<mailto:treecep@adeq.state.ar.us>>) if you can send along responses to her.

Thanks, Paul

Paul J. Miller, Lead Manager

Ozone Transport Commission

89 South Street, Suite 602

Boston, MA 02111

Ph: 617-259-2016

From: Michael Vince <mvince@censara.org<<mailto:mvince@censara.org>>>

Sent: Thursday, May 28, 2020 8:09 AM

To: Paul Miller <pmiller@nescaum.org<<mailto:pmiller@nescaum.org>>>; John Hornback <hornback@metro4-sesarm.org<<mailto:hornback@metro4-sesarm.org>>>; Zac Adelman <adelman@ladco.org<<mailto:adelman@ladco.org>>>; Mary Uhl <maryuhl@westar.org<<mailto:maryuhl@westar.org>>>; Marc Cone <mcone@marama.org<<mailto:mcone@marama.org>>>

Subject: Fw: QC on Compilation of RH Costs Spreadsheet by respective states

Importance: High

Arkansas has asked that I share this with you and requests a very quick turnaround of June 3! Can you please forward on to your state contacts? The Arkansas contact is Tricia Treece and her contact information is below.

Michael Vince, Executive Director

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[Oklahoma City, OK 73101](https://urldefense.com/v3/_http://P.O.Box_!!Oai6dtTQULp8Sw!AolbqEX7Q5coXS8deAtDoVqYbUmu8YGpld1HmNPC2qXbl4BdZQfqIgl7gwaHMxYNJ3nG8A$<https://urldefense.com/v3/_http://P.O.Box_!!Oai6dtTQULp8Sw!EdsoJigM4XIVhvm6Saoh6SEnc08Ins3bm3Xxj3Lxn-3oDi61zH6pO3VXkpvHA_yJDBm8-GsVKg$>617, 707 N. Robinson Ave.</p></div><div data-bbox=)

405-813-4300 Ext 1 (office)

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[4](https://urldefense.com/v3/_http://www.censara.org_!!Oai6dtTQULp8Sw!AolbqEX7Q5coXS8deAtDoVqYbUmu8YGpld1HmNPC2qXbl4BdZQfqIgl7gwaHMxYHztzysg$<https://urldefense.com/v3/_http://www.censara.org/_!!Oai6dtTQULp8Sw!EdsoJigM4XIVhvm6Saoh6SEnc08Ins3bm3Xxj3Lxn-3oDi61zH6pO3VXkpvHA_yJDBlwMn0r5Q$></p></div><div data-bbox=)

From: Treece, Tricia <treecep@adeq.state.ar.us<mailto:treecep@adeq.state.ar.us>>

Sent: Tuesday, May 26, 2020 3:31 PM

To: Michael Vince <mvince@censara.org<mailto:mvince@censara.org>>

Cc: clarkd@adeq.state.ar.us<mailto:clarkd@adeq.state.ar.us> <clarkd@adeq.state.ar.us<mailto:clarkd@adeq.state.ar.us>>; montgomery@adeq.state.ar.us<mailto:montgomery@adeq.state.ar.us> <montgomery@adeq.state.ar.us<mailto:montgomery@adeq.state.ar.us>>; Jobe, Kelly <JOBE@adeq.state.ar.us<mailto:JOBE@adeq.state.ar.us>>; Droke, Erika <droke@adeq.state.ar.us<mailto:droke@adeq.state.ar.us>>

Subject: QC on Compilation of RH Costs Spreadsheet by respective states

Michael,

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- ND
- NE
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- NM
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Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us<mailto:%20treecep@adeq.state.ar.us>

[cid:image007.png@01D63515.B63A0790]

Treece, Tricia

From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Wednesday, June 3, 2020 11:41 AM
To: Treece, Tricia
Cc: 'kenski@ladco.org'; Salmon, Olivia E - DNR
Subject: RE: QC on Compilation of RH Costs Spreadsheet by respective states
Attachments: HazeSIPBARTAttachment4.pdf

Hi Tricia,

The table below summarizes some information from our final BART determination (see <https://dnr.wi.gov/topic/AirQuality/Particles.html> under the “Visibility” tab, and look for “Wisconsin’s Implementation of BART – Attachment 4). Also attaching the document here.

Summary of BART controls applied to stack S10 at GP.

Pollutant	BART Cost (\$M/yr)	Baseline tons	Post-BART tons	\$/ton reduced
NOx	3.5	3,510	1,033	1,413
SO2	18.1	12,644	2,404	1,768

I recommend you keep the NOx and SO2 cost-effectiveness separate, instead of the combined NOx-SO2 cost-effectiveness in your spreadsheet.

Thanks,
Jon

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jonathan P. Loftus

Senior Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Donna Kenski <kenski@ladco.org>

Sent: Monday, June 1, 2020 10:39 AM

To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>; Tom Julien <julient@michigan.gov>; Hassan Bouchareb <hassan.bouchareb@state.mn.us>

Subject: Fwd: QC on Compilation of RH Costs Spreadsheet by respective states

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To: Paul Miller <pmiller@nescalum.org>, John Hornback <hornback@metro4-sesarm.org>, Zac Adelman <adelman@ladco.org>, Mary Uhl <maryuhl@westar.org>, Marc Cone <mcone@marama.org>

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Cc: clarkd@adeq.state.ar.us <clarkd@adeq.state.ar.us>; montgomery@adeq.state.ar.us <montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>

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- WY

Tricia Treece | SIP/Planning Supervisor
**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us

--

Donna M. Kenski, Ph.D.

Lake Michigan Air Directors Consortium
847-720-7880 (work)
847-347-3474 (cell)
kenski@ladco.org

Treece, Tricia

From: Payne, Rhonda <repayne@mt.gov>
Sent: Thursday, June 4, 2020 11:39 AM
To: Treece, Tricia
Cc: Michael Vince
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states

Hello Ms. Treece,

I apologize for not sending you this note last night.

MT reviewed the spreadsheet and would like to comment that the limits on Colstrip Units 1 & 2 were remanded – they were found to be arbitrary and capricious in the first round. This may be too much information, but here is what MT included in our RH progress report, approved in 2018:

“On June 9, 2015, the United States Court of Appeals for the Ninth Circuit vacated the emission limits for Talen Energy Colstrip Units 1 and 2 (and Corette), after the court found the NOx and SO2 limits to be arbitrary and capricious, and remanded the determination back to EPA. As of this submittal, EPA has not yet acted on the remand. However, the plant operator did install separated overfire air controls on Units 1 and 2 and SmartBurn technology on Unit 2 before the original BART limits were vacated. In the summer of 2016, an agreement was reached between Sierra Club and the owners of the Colstrip facility. As part of the agreement, Colstrip Units 1 and 2 must shut down no later than July 1, 2022. In addition, the owners agreed that Units 1 and 2 would comply with the following NOx and SO2

Emission limits until such time as the units cease operation:

- *Unit 1 NOx limit – 0.45 lb/mmBtu (30-day rolling average)*
- *Unit 2 NOx limit – 0.20 lb/mmBtu (30-day rolling average)*
- *Units 1 and 2 SO2 limit – 0.40 lb/mmBtu (30-day rolling average)*

This Consent Decree is binding and, as such, these emission limits will continue to be beneficial for emission reductions until such time as Colstrip Units 1 and 2 cease operation, at which time all emissions associated with these units will permanently cease.”

Thank you,

Rhonda Payne

Rhonda Payne
Montana DEQ – Air Quality Bureau

Phone: 406.444.5287
Fax: 406.444.1499

From: Henrikson, Craig
Sent: Tuesday, June 02, 2020 4:44 PM
To: Payne, Rhonda <repayne@mt.gov>
Subject: RE: QC on Compilation of RH Costs Spreadsheet by respective states

Rhonda, I assume those costs are captured from the Round 1 analysis. However, it would be risky for them also not flagging that the SNCR for units 1 and 2 were tossed by the courts, right? Arbitrary and capricious.

Regards,

Craig Henrikson, P.E.
Environmental Engineer
Permitting Services Section
Air Quality Bureau
Montana Department of Environmental Quality
PH 406-444-6711 Fax 444-1499

From: Payne, Rhonda
Sent: Tuesday, June 02, 2020 4:30 PM
To: Henrikson, Craig <CHenrikson@mt.gov>
Subject: FW: QC on Compilation of RH Costs Spreadsheet by respective states

Hi Craig,

Arkansas would like states to take a glance at this spreadsheet and offer any comments we have by COB June 3rd (tomorrow). I am not sure what type of feedback they are looking for - if only just a QA/QC of the units listed for MT? Anyway, if anything immediately jumps out as being wrong, let me know. Otherwise, I'll send back 'no comments' -

Thanks!

Rhonda

Rhonda Payne
Montana DEQ – Air Quality Bureau
Phone: 406.444.5287

Fax: 406.444.1499

From: Stroh, David E. [<mailto:deStroh@nd.gov>]

Sent: Monday, June 01, 2020 9:51 AM

To: molly.birnbaum@alaska.gov; emerta@cabq.gov; Templeton.Ryan@azdeq.gov; christine.suarez-murias@arb.ca.gov; curtis.taipale@state.co.us; michael.madsen@doh.hawaii.gov; Pascale.Warren@deq.idaho.gov; sjaunara@ndep.nv.gov; Mark.Jones@state.nm.us; Stroh, David E. <deStroh@nd.gov>; Orman.Michael@deq.state.or.us; rick.boddicker@state.sd.us; jbaker@utah.gov; jhuy461@ecy.wa.gov; Payne, Rhonda <repayne@mt.gov>; amber.potts@wyo.gov; csti461@ecy.wa.gov

Cc: tmoore@westar.org; maryuhl@westar.org

Subject: [EXTERNAL] FW: QC on Compilation of RH Costs Spreadsheet by respective states

Morning all,

See attached spreadsheet and email chain below. Ultimately, Arkansas is looking for states to review the cost-effectiveness (column I) from Regional Haze Round 1 and provide any input for the sources in their state by COB June 3rd. This is a very quick turnaround, if you are able to review and reply with any corrections or comments – that would be great.

You can reply directly to Tricia using the following info:

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us

Regards,

David

David Stroh

Environmental Engineer

701-328-5188 • destroh@nd.gov



[\[gcc01.safelinks.protection.outlook.com\]](mailto:gcc01.safelinks.protection.outlook.com)

918 E. Divide Ave. • Bismarck, ND 58501

From: Mary Uhl <maryuhl@westar.org>
Sent: Thursday, May 28, 2020 2:26 PM
To: Tom Moore <tmoore@westar.org>; Stroh, David E. <deStroh@nd.gov>; jbaker@utah.gov; 'Amber Potts' <amber.potts@wyo.gov>
Subject: Fw: QC on Compilation of RH Costs Spreadsheet by respective states

CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Mary Uhl, Executive Director

Western States Air Resources Council (WESTAR)

3 Caliente Rd #8

Santa Fe, NM 87508

maryuhl@westar.org

(505) 930-5197

From: Michael Vince <mvince@censara.org>
Sent: Thursday, May 28, 2020 6:09 AM
To: Paul Miller <pmiller@nescaum.org>; John Hornback <hornback@metro4-sesarm.org>; Zac Adelman <adelman@ladco.org>; Mary Uhl <maryuhl@westar.org>; Marc Cone <mccone@marama.org>
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Michael Vince, Executive Director
Central States Air Resource Agencies Association (CenSARA)

[P.O.Box](#) 617, 707 N. Robinson Ave.
Oklahoma City, OK 73101
405-813-4300 Ext 1 (office)

mvince@censara.org
<http://www.censara.org> [[censara.org](mailto:mvince@censara.org)]

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Tuesday, May 26, 2020 3:31 PM
To: Michael Vince <mvince@censara.org>
Cc: clarkd@adeq.state.ar.us <clarkd@adeq.state.ar.us>; montgomery@adeq.state.ar.us <montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>;
Droke, Erika <droke@adeq.state.ar.us>
Subject: QC on Compilation of RH Costs Spreadsheet by respective states

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- ND
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- NM
- NV
- OK
- SD
- TX
- UT
- WA
- WI
- WY

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Jones, Mark, NMENV <Mark.Jones@state.nm.us>
Sent: Thursday, June 4, 2020 8:18 PM
To: Treece, Tricia
Cc: Stroh, David E.; Baca, Michael, NMENV
Subject: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states
Attachments: Compilation of Costs used for RH PP1.xlsx; 2014-23905.pdf; 2014-23904.pdf

Hi Tricia,

Please see the attached 2 federal register notices. The EPA 2011 FIP determination for SJGS BART for NOx emissions that you included in your spreadsheet was superseded with a State Implementation Plan (SIP), submitted by the New Mexico Environmental Department (NMED) to EPA, which address revised Best Available Retrofit Technology (BART) requirements for NOx.

The State Alternative consists of a previously untemplated control scenario involving unit shutdowns at the SJGS.

More specifically, the 2013 RH SIP revision requires the following:

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- ☐ PNM will commence a program of testing and evaluation, after the installation of the SNCRs, to determine if additional NOx emission reductions can be achieved. The Testing Program, consisting of SNCR performance testing, fuel performance testing, and long-term performance evaluation, must be completed no later than January 31, 2017.s

If you give me a call we can discuss the details as well as where you can find the cost/ton for the SNCR.

I'd be interested in how you are coming along in your overall regional haze planning for the 2nd implementation period as well.

Thanks,
Mark Jones

Mark Jones
Environmental Analyst
New Mexico Environment Department
Air Quality Bureau
1800 E. 30th St. Suite B
Farmington, NM 87401
Telework 505-427-6920
Office: (505) 566-9746
Mark.Jones@state.nm.us

<https://www.env.nm.gov/>

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Cc: tmoore@westar.org; maryuhl@westar.org

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**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us

Regards,

David

David Stroh

Environmental Engineer

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NORTH
Dakota | Environmental Quality
Be Legendary.™

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Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
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5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Jones, Mark, NMENV <Mark.Jones@state.nm.us>
Sent: Monday, June 8, 2020 4:26 PM
To: Treece, Tricia
Cc: Stroh, David E.; Baca, Michael, NMENV; Clark, David
Subject: RE: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states

Thank you! I agree. Good talking.

Here are a few resources that we discussed today from WRAP:

1. <https://views.cira.colostate.edu/iwdw/> Here is the intermountain West Datawarehouse site. It contains monitoring, emissions, and modeling platforms for WRAP states.
2. Info on the June 23 and 25th modeling seminar discussing modeling results for RH is shown on the WRAP homepage, under the calendar section: <https://www.wrapair2.org/> you are welcome to attend.
3. The WRAP Regional Technical Operations Workgroup (RTOWG) is in charge of the Regional modeling for regional haze: <https://www.wrapair2.org/rtowg.aspx> they have many docs on the recent 2028 modeling done for WRAP states and put their work products online as they become available.
4. The WRAP regional haze planning – control measures subgroup, https://www.wrapair2.org/RHP_Control.aspx has some info on Round 1 BART for RH.
 - a. I'm just copying from the website above here:

Regional Haze Planning Workgroup Control Measures Subcommittee

Overview/Purpose for all RHPWG Subcommittees:

The purpose of the subcommittees in their subject areas would be to:

5. Interact and coordinate with other appropriate WRAP Work Groups for Regional Haze SIP preparation tasks.
6. Develop principles or protocols to guide RH SIP preparation tasks that are appropriate for western state circumstances.
7. Determine when and what contract work is needed and assist in preparation of contract tasks and evaluation of work products.
8. Keep pace of work on schedule for RH SIP preparation
 - a. The Control Measures Subcommittee develops Four-Factor Analysis Protocol or Process and assembles a Control Measure Clearinghouse.

Responsibilities and Deliverables

Work Products

[WRAP Reasonable Progress Source Identification and Analysis Protocol](#)

[WRAP TSS Q/D Analysis webpage](#)

[WesternState Round 1 Four Factor Determinations 20191021.xlsx](#)

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, June 8, 2020 2:01 PM
To: Jones, Mark, NMENV <Mark.Jones@state.nm.us>
Cc: Stroh, David E. <deStroh@nd.gov>; Baca, Michael, NMENV <michael.baca1@state.nm.us>; Clark, David <CLARKD@adeq.state.ar.us>
Subject: [EXT] RE: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states

Mark,
Thanks for the conversation today! Attached is the compilation of costs spreadsheet with updates based on the feedback we received from other states.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
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ARKANSAS
ENERGY & ENVIRONMENT

From: Jones, Mark, NMENV [<mailto:Mark.Jones@state.nm.us>]
Sent: Friday, June 5, 2020 9:23 AM
To: Treece, Tricia
Cc: Stroh, David E.; Baca, Michael, NMENV; Droke, Erika
Subject: RE: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states

Could we have a short 30 min call on Monday. I'm available all day.

Do you have availability then?

Thank you,

Mark

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Friday, June 5, 2020 6:40 AM
To: Jones, Mark, NMENV <Mark.Jones@state.nm.us>
Cc: Stroh, David E. <deStroh@nd.gov>; Baca, Michael, NMENV <michael.baca1@state.nm.us>; Droke, Erika <droke@adeq.state.ar.us>
Subject: [EXT] RE: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states

Thank you for the information Mark! We have not been including alternatives to BART in the analysis, so I will eliminate the entries for the San Juan units. I'd be happy to talk to you about SIP development for planning period II. My work phone in the signature line below forwards to my personal phone. With the exception of a meeting I have at 9 am CDT (8 am MDT), I am available for a call anytime between now and 3:30 pm CDT (2:30 pm MDT).

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
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5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



From: Jones, Mark, NMENV [<mailto:Mark.Jones@state.nm.us>]
Sent: Thursday, June 4, 2020 8:18 PM
To: Treece, Tricia
Cc: Stroh, David E.; Baca, Michael, NMENV
Subject: NM - San Juan Generating Station / FW: QC on Compilation of RH Costs Spreadsheet by respective states

Hi Tricia,

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If you give me a call we can discuss the details as well as where you can find the cost/ton for the SNCR.

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Regards,
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David Stroh

Environmental Engineer

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ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Johnson, Matthew <matthew.johnson@dnr.iowa.gov>
Sent: Friday, June 12, 2020 11:58 AM
To: Wharton, Tracy
Cc: Treece, Tricia
Subject: Re: RH Source Selection for 4FA
Attachments: sourceSelectionIowa-FLMconsultation.final.pptx; 20200605-NPS_4F_Scorecard-compilationStateMethods.xlsx

Hello Tracy

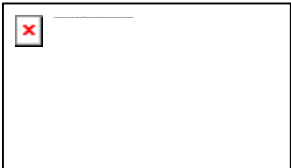
We are using the Arkansas approach (the cumulative EWRT-Q/d approach), but with two modifications (not because we thought there was anything wrong with what Arkansas did, in fact, if it wasn't for their efforts Iowa still wouldn't have an approach, I can't thank them enough for the work they did). Here are the 2 differences:

- 1) When using the Ramboll spreadsheet, we set both ERTW-NO3 and EWRT-SO4 screening thresholds to zero (this keeps all sources screened in, I think Arkansas used a 0.05 screening threshold).
 - 2) We used a 50% cumulative total (running total) threshold. I believe Arkansas used 70%.
- This gave us 2 sources.

I've attached a presentation that we provided to the FLMS just last week. It summarizes the approach (and contains a link to a file that we just recently finalized that should do the calculations on the fly - but it is large, and slow, so it might just be easier to use Arkansas's version). Arkansas may find the presentation looks familiar - thank you again Tricia!!! (We used your presentation as our template.)

One more thing, I've included a "scorecard" that the National Park Service has - it tracks what states are using for their source selection methodology.

Matthew



Matthew Johnson | Environmental Specialist Senior
Iowa Department of Natural Resources
P 515-725-9554 | F 515-725-9501 | 502 E 9th St, Des Moines IA 50319
Apply for Air Permits @ [Iowa EASY Air](#)
www.iowadnr.gov

On Fri, Jun 12, 2020 at 11:28 AM Wharton, Tracy <tracy.wharton@nebraska.gov> wrote:

Good morning,

I'm just reaching out to other states and wondering if you are using a specific threshold for selecting sources for four-factor analysis and, if so, can you share what that is? Is there other criteria you are using as well? We are looking at a couple different options and just curious about what other states were doing.

Thank you and hope you have a great weekend!

Tracy

Respectfully,

Tracy Wharton

NAAQS-SIP COORDINATOR
Air Quality Division

Nebraska Department of Environment and Energy

PO Box 98922
Lincoln, NE 68509-8922

Main Office: 402-471-2186
Direct Line: (402) 471-6410

<http://dee.ne.gov>

<http://dee.ne.gov> | [Twitter](#) | [Facebook](#) **** NEW ****

Treece, Tricia

From: Walker Williamson <walker.williamson@tceq.texas.gov>
Sent: Friday, June 12, 2020 12:44 PM
To: Treece, Tricia
Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Sorry to be late in getting back to you on this, Tricia. The numbers you had in your spreadsheet matched what we saw in the EPA's notice too. Just to make sure you are aware, EPA took a voluntary remand on its FIP for reasonable progress from the 5th Circuit and that remand remains unaddressed.

Sorry again to be so late in getting back to you.

Walker Williamson
Senior Project Manager, Air Quality Division
Texas Commission on Environmental Quality
(512) 239-3181



How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Thursday, May 28, 2020 8:03 AM
To: Walker Williamson <walker.williamson@tceq.texas.gov>
Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Thank you!

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
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Sent: Thursday, May 28, 2020 8:03 AM
To: Treece, Tricia
Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Ha! Me too.

Okay, I believe that all we will have that's approved would be NOx BART from the first planning period. We had a FIP for SO2 BART and reasonable progress. For those, I don't know that we would be able to confirm the costs since I believe EPA worked directly with the companies to get the costs.

I'll check with the team and let you know.

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Thursday, May 28, 2020 7:56 AM
To: Walker Williamson <walker.williamson@tceq.texas.gov>
Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Correct. We primarily searched through EPA actions on SIPs for EPA-approved BART and/or RP determinations. We are only interested in approved final determinations for BART or reasonable progress that are source-specific. We are not including disapproved determinations, "alternatives to BART," or limits that are not based on RH-specific cost-effectiveness values. (For instance, a settlement entered for another purpose being used as a BART or RH limit).

Also, I am happy my email went through!

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Walker Williamson [<mailto:walker.williamson@tceq.texas.gov>]

Sent: Thursday, May 28, 2020 7:48 AM

To: Treece, Tricia

Subject: RE: QC on Compilation of RH Costs Spreadsheets by Respective States

Good morning, Tricia.

Just to make sure I understand, your spreadsheet includes control cost estimates from the first planning period (it looks like you got the ones for Texas from EPA's action on our SIP) and you would like us to check to see if those values match what we had for the first planning period?

Thanks,

Walker Williamson

Senior Project Manager, Air Quality Division

Texas Commission on Environmental Quality

(512) 239-3181





How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Thursday, May 28, 2020 7:22 AM

To: William Garbe (Cooper.Garbe@deg.ok.gov) <Cooper.Garbe@deg.ok.gov>; Delveccio Brown (Delveccio.Brown@LA.GOV) <Delveccio.Brown@LA.GOV>; 'lynn.deahl@ks.gov' <lynn.deahl@ks.gov>; Walker Williamson <walker.williamson@tceq.texas.gov>; 'tracy.wharton@nebraska.gov' <tracy.wharton@nebraska.gov>

Cc: Montgomery, William <Montgomery@adeq.state.ar.us>; Clark, David <CLARKD@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>

Subject: QC on Compilation of RH Costs Spreadsheets by Respective States

Arkansas has put together the attached spreadsheet of PP1 BART and reasonable progress determination cost-effectiveness values. We have entries for the following states in CenSARA.

- KS
- LA
- NE
- OK
- TX

Would you please look over the entries for sources in your state and let us know if you have any corrections (particularly with respect to the cost-effectiveness and dollar basis columns) by COB Wednesday June 3, 2020?

Tricia Treece | SIP/Planning Supervisor

Division of Environmental Quality | Office of Air Quality

Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Delveccio Brown <Delveccio.Brown@LA.GOV>
Sent: Friday, June 19, 2020 3:08 PM
To: Treece, Tricia
Cc: Kelly Petersen
Subject: Fw: Regional Haze Information Collection Request - Dolet Hills Power Station
Attachments: ADPD60A RH tmp-signed.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Tricia,

We received this May 18 from Cleco Power regarding Dolet Hills. Wanted to share this with you as they are one of the facilities identified for potential impact to Caney Creek. We have not received a response from any of the other facilities.

Thanks,

Delveccio Brown

Air Planning and Assessment Division
Louisiana Department of Environmental Quality
225-219-3583
delveccio.brown@la.gov

From: Vivian Aucoin
Sent: Monday, May 18, 2020 10:55 AM
To: Delveccio Brown; Kelly Petersen; Maureen Ducote; Vennetta Hayes
Cc: Jason Meyers
Subject: FW: Regional Haze Information Collection Request - Dolet Hills Power Station

FYI

From: William Matthews <william.matthews@cleco.com>

Sent: Monday, May 18, 2020 10:46 AM

To: Jason Meyers <Jason.Meyers@LA.GOV>

Cc: Vivian Aucoin <Vivian.Aucoin@LA.GOV>; Russ Snyder <russ.snyder@cleco.com>; Maile Murray <Maile.Murray@cleco.com>

Subject: Regional Haze Information Collection Request - Dolet Hills Power Station

EXTERNAL EMAIL: Please do not click on links or attachments unless you know the content is safe.

Attached is a memo from Cleco Power LLC regarding the Regional Haze Information Collection Request for Dolet Hills Power Station.

If there are questions or other issues, please feel free to contact me.

Thanks,

Bill Matthews

Director Environmental Policy & Planning

Cleco Support Services

Office 318 484-7718

Cell 318 623-6436



Cleco Power LLC
2030 Donahue Ferry Rd
P. O. Box 5000
Pineville, LA 71361-5000

May 15, 2020

Jason Meyers, Administrator
Louisiana Department of Environmental Quality
Air Planning and Assessment Division
P.O. Box 4314
Baton Rouge, Louisiana 70821-4314

Re: Cleco Power LLC – Dolet Hills Power Station
Information Request to Cleco Power, LLC - Dolet Hills Power Station
Regarding Regional Haze Four-Factor Analysis
Agency Interest No. 585

Dear Mr. Meyers:

Cleco Power LLC (Cleco) submits this initial response to the Louisiana Department of Environmental Quality (LDEQ) in response to the above-referenced Information Collection Request (ICR), dated March 18, 2020. Cleco appreciates the opportunity to provide information related to the U.S. Environmental Protection Agency's Regional Haze rule.

As you know, LDEQ's ICR requests that Cleco submit information about potential emission reduction strategies for SO₂ and NO_x emissions from Dolet Hills Power Station. The deadline to submit information to LDEQ for this request is July 30, 2020. However, in April 2020, Cleco Power announced its intent to seek regulatory approval to retire the Dolet Hills Power Station at the end of 2021, subject to recovery mechanisms. Cleco and co-owner AEP/SWEPCO recently informed the Louisiana Public Service Commission (LPSC) of its intent to cease operating the on-site mine in June 2020 after accumulating enough coal to operate the Dolet Hills station through at least seasonal operations through 2021.

Due to the projected retirement of the Dolet Hills station, Cleco anticipates that this facility will cease operation prior to the compliance deadline set forth in the federal Regional Haze rule. For this reason, Cleco does not intend to provide the detailed information set forth in the ICR for this facility. If the above projection changes, Cleco will immediately inform LDEQ and recommence work on the ICR.

If there are questions concerning this response, please contact Bill Matthews at (318)623-6436.

Sincerely,

Russ Snyder

Russ Snyder
Vice President – Generation Operations

cc: Vivian Aucoin – LDEQ
Bill Matthews

Treece, Tricia

From: Peters, Melanie <Melanie_Peters@nps.gov>
Sent: Monday, June 22, 2020 4:08 PM
To: Treece, Tricia
Cc: Clark, David; Montgomery, William; King, Kirsten L
Subject: Re: [EXTERNAL] RE: RH Schedule Check-In

Thank you Tricia!

We look forward to seeing your team's analysis of the information collected when it is available and to working with you as you draft the SIP.

I appreciate you sending along your schedule, it will help as we work to figure out our workload/schedule for the coming months. I do have a question about that and tried to call you but went directly to voicemail for "Patricia Jackson." I am not totally sure that is you so I didn't leave a message ;) Maybe it is though? My maiden name still follows me in some work/government systems... In any case, my question is about when to expect formal FLM consultation. According to the rule this must occur 60 days prior to any public comment opportunity. So, backing that out from your schedule I am thinking we should plan on late summer (early August?) to give 60 days in advance of your planned Fall 2020 (October?) stakeholder meeting? Or, did you have something else in mind?

Best,
Melanie

--

Melanie V. Peters
NPS, Air Resources Division

Office: 303-969-2315
Cell: 720-644-7632



From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Monday, June 22, 2020 6:46 AM

To: Peters, Melanie <Melanie_Peters@nps.gov>

Cc: Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>

Subject: [EXTERNAL] RE: RH Schedule Check-In

Melanie,

We are in the process of drafting our four-factor analyses for the sources to which we sent information collection requests. The information provided for these sources was posted to our webpage in May. See attached email on May 7 to the FLM group regarding notice of availability for these responses. See below for a tentative schedule of our SIP development activities. If you have any, questions about the schedule, feel free to give me a call. If you would like to discuss any of the information contained in the information collection request responses we received from our facilities, we can set up a conference call with you and our Regional Haze team.

Task Name	Start	Finish
Source Selection	10/1/19	12/31/19
Information Collection Request Sent	Wed 1/8/20	
Responses to Information Collection Request due	Tue 4/7/20	
Four Factor Analysis	Wed 4/8/20	Thu 6/30/20
Preparation of draft regulatory language	6/15/20	6/30/20
Preparation of Draft SIP parts that will be proposed alongside rulemaking	Mon 1/1/18	6/30/20
FLM/States/EPA R6 Preproposal review	Summer 2020	
DEQ evaluation of FLM/States/EPA R6 comments	Summer/Fall 2020	
Stakeholder Meeting on Regional Haze <i>-Presentation on purpose, rationale</i> <i>-Discussion of consultation between DEQ and FLMs/States</i> <i>-Opportunity for discussion by the public (questions/comments)</i>	Fall 2020	
Initiation of Rulemaking	Fall 2020 – Public Notice published second Sunday after Initiation	
Public Comment Period	Fall 2020 -	

	Early Winter 2021 (Public Notice publication date to 10 business days after Public Hearing, est. 45 days)
Public Hearing	Early Winter 2021 (30 days following publication of Public Notice)
Adoption of Rulemaking by Commission	Spring 2021
Legislative Review	Spring 2021
SIP Submission to EPA	Summer 2021

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
 5301 Northshore Drive | North Little Rock, AR 72118
 t: 501.682.0055 | e: treecep@adeq.state.ar.us



From: Peters, Melanie [mailto:Melanie_Peters@nps.gov]
Sent: Friday, June 19, 2020 4:08 PM
To: Treece, Tricia
Subject: RH Schedule Check-In

Hello Tricia!

I hope you are well. I am in the long overdue process of updating my notes on RH status for the states and have lost track of your planned schedule in Arkansas. Will you please remind me what ya'll are planning as far as the schedule goes? I have a vague memory that you are pushing against some legislative deadlines and may be ahead of some of the other states. Also, has your team had a chance to review the 4-Factor analyses submitted by the facilities yet? If so, are you planning to post those reports/responses? (We have not taken a look at the analyses yet.)

Best,

Melanie

--

Melanie V. Peters

NPS, Air Resources Division

Office: 303-969-2315

Cell: 720-644-7632



Droke, Erika

Subject: VISTAS request for reasonable progress analysis of an Arkansas source
Attachments: VISTAS Letter Arkansas Montgomery 200622.pdf

From: Montgomery, William
Sent: Tuesday, June 23, 2020 8:27 AM
To: Treece, Tricia; Clark, David
Subject: Fw: VISTAS request for reasonable progress analysis of an Arkansas source

See attached.

William K. Montgomery | Associate Director
Division of Environmental Quality | Office of Air Quality
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682-0885 | c: 501-251-4808 | e: montgomery@adeq.state.ar.us

From: John Hornback <hornback@metro4-sesarm.org>
Sent: Monday, June 22, 2020 4:57 PM
To: Montgomery, William
Cc: Michael Vince
Subject: VISTAS request for reasonable progress analysis of an Arkansas source

Good afternoon, Will. Attached please find a letter on behalf of North Carolina. I think I had mentioned on a CenSARA call that we would likely be reaching out to some CenSARA states. We are sending a letter to Missouri as well.

You will note that there are two e-mail addresses listed in the letter. Please communicate directly with me at this e-mail address between now and the end of September when I will be retiring. The vistas@metro4-sesarm.org address is a longer-term inbox for information that you may file with us in response to this letter. I'll try to remember to send you an e-mail update for my successor when named.

Please let me know if you have any questions. Thanks. John.

John E. Hornback
Executive Director
Metro 4/SESARM
205 Corporate Center Dr Ste D
Stockbridge GA 30281-7383
404-361-4000 (office)
770-605-3059 (cell)
<https://metro4-sesarm.org>



Visibility Improvement State and Tribal Association of the Southeast

June 22, 2020

William K. Montgomery, Associate Director
Arkansas Office of Air Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5328

RE: Request for Regional Haze Reasonable
Progress Analysis for Arkansas Source
Impacting VISTAS Class I Area

Dear Mr. Montgomery:

The Regional Haze Regulation 40 CFR § 51.308(d) requires each state to “address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State which may be affected by emissions from within the State.” 40 CFR § 51.308(f) requires states to submit a regional haze implementation plan revision by July 31, 2021. As part of the plan revision, states must establish a reasonable progress goal that provides for reasonable progress towards achieving natural visibility conditions for each mandatory Class I Federal area (Class I area) within their state. 40 CFR § 51.308(d)(1) requires that reasonable progress goals “must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period.”

In establishing reasonable progress goals, states must consider the four factors specified in § 169A of the Federal Clean Air Act and in 40 CFR § 51.308(f)(2)(i). The four factors are: 1) the cost of compliance, 2) the time necessary for compliance, 3) the energy and non-air quality environmental impacts of compliance, and 4) the remaining useful life of any potentially affected sources. Consideration of these four factors is frequently referenced as the “four-factor analysis.”

To assist its member states, the Visibility Improvement State and Tribal Association of the Southeast¹ (VISTAS) and its contractors conducted technical analyses to help states identify

¹ The VISTAS states are Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

sources that significantly impact visibility impairment for Class I areas within and outside of the VISTAS region. VISTAS initially used an Area of Influence (AoI) analysis to identify the areas and sources most likely contributing to poor visibility in Class I areas. This AoI analysis involved running the HYSPLIT Trajectory Model to determine the origin of the air parcels affecting visibility within each Class I area. This information was then spatially combined with emissions data to determine the pollutants, sectors, and individual sources that are most likely contributing to the visibility impairment at each Class I area. This information indicated that the pollutants and sector with the largest impact on visibility impairment were sulfur dioxide (SO₂) and nitrogen oxides (NO_x) from point sources. Next, VISTAS states used the results of the AoI analysis to identify sources to “tag” for PM (Particulate Matter) Source Apportionment Technology (PSAT) modeling. PSAT modeling uses “reactive tracers” to apportion particulate matter among different sources, source categories, and regions. PSAT was implemented with the Comprehensive Air Quality Model with extensions photochemical model (CAMx Model) to determine visibility impairment due to individual sources. PSAT results showed that in 2028 the majority of visibility impairment at VISTAS Class I areas will continue to be from point source SO₂ and NO_x emissions. Using the PSAT data, VISTAS states identified, for reasonable progress analysis, sources shown to have a sulfate or nitrate impact on one or more Class I areas greater than or equal to 1.00 percent of the total sulfate plus nitrate point source visibility impairment on the 20 percent most impaired days for each Class I area. This analysis has identified the following source in Arkansas that meets this criterion:

- Entergy Arkansas Inc-Independence Plant (05063-1083411)

Information regarding projected 2028 SO₂ and NO_x emissions and visibility impacts on a VISTAS Class I area is shown in the table attached to this letter (Attachment 1).

As required in 40 CFR § 51.308(d)(1)(i)(A), VISTAS, on behalf of North Carolina, requests that Arkansas conduct, or require that the source in question initiate, and share when completed, the results of a reasonable progress analysis for the noted source with VISTAS. This will be helpful to North Carolina as they begin the formal Federal Land Manager consultation process for their individual draft Regional Haze Plan in early 2021. So that North Carolina can include the results of your state's reasonable progress analysis in developing the long-term strategy for the Shining Rock Wilderness Class I area in North Carolina, we request that you submit this information to VISTAS no later than October 30, 2020. If the reasonable progress analysis cannot be completed by this date, please provide, no later than this date, notice of an attainable date for completion of the analysis. If you determine that a four-factor analysis is not warranted for the identified source, please provide the rationale for this determination by the requested date.

In developing projected 2028 emissions for the source, VISTAS utilized ERTAC_16.0 emissions projections with additional input from Arkansas. Please review these projections to verify that they are reasonable. Should you be aware of significantly different emission projections for

2028 for the source or pollutants, please provide revised estimates within thirty (30) days of the date of this letter. North Carolina will review any revised emission estimates, determine if a reasonable progress analysis is not needed to meet their regional haze obligations, and notify you accordingly.

Updated 2028 emission projections, if necessary, the results of your state's reasonable progress analysis for the requested source, and any necessary ongoing communications should be sent via email to vistas@metro4-sesarm.org.

Should you have any questions concerning this request, please contact me through September 30, 2020, at 404-361-4000 or hornback@metro4-sesarm.org.

Sincerely,



John E. Hornback
Executive Director
Metro 4/SESARM/VISTAS

Attachment

Copies: Mike Abraczinskas, North Carolina Division of Air Quality
Michael Vince, Central States Air Resource Agencies

Attachment 1: Projected 2028 SO₂ and NO_x Emissions and VISTAS Class I Area Impacts

Table 1. Entergy Arkansas Inc-Independence Plant (05063-1083411)

Modeled SO₂ = 13,643.5 tpy, Modeled NO_x = 4,486.3 tpy

Impacted VISTAS Class I Area	Sulfate PSAT (Mm ⁻¹)	Nitrate PSAT (Mm ⁻¹)	Total EGU & non- EGU Sulfate + Nitrate (Mm ⁻¹)	Sulfate PSAT % Impact	Nitrate PSAT % Impact
Shining Rock Wilderness Area	0.129	0.001	12.313	1.04%	0.01%

Treece, Tricia

From: Treece, Tricia
Sent: Tuesday, July 7, 2020 3:30 PM
To: 'randy.strait@ncdenr.gov'; 'vistas@metro4-sesarm.org'; 'hornback@metro4-sesarm.org'
Cc: Montgomery, William; Clark, David
Subject: RE: VISTAS request for reasonable progress analysis of an Arkansas source

This email is intended to notify you that the Entergy's response to our four-factor analysis information collection request for Independence is posted to our webpage: http://www.adeg.state.ar.us/air/planning/sip/pdfs/regional-haze/entergy_icr_response_report.pdf

We are sharing the information we collected with you pursuant to your June 22, 2020 letter. In our information collection requests, we asked permittees to calculate emission reductions on a maximum month emission rate basis. Based on information received, we intend to evaluate cost-effectiveness on an average emission rate basis. The information for both was provided in Entergy's response.

As part of our consultation process, we are sharing the information we collected with you to allow you to ask DEQ questions or provide input prior to DEQ completing the four factor analysis and control strategy determination. Once we have completed preparation of our proposed SIP revision, we will provide the opportunity for consultation on the complete pre-proposal draft in accordance with the requirements of the Regional Haze Rule.

We do not have any further revisions to the 2028 emissions projections for Independence.

If you have any questions, we would be happy to set up a call.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

Subject: FW: TCEQ Regional Haze Consultation Call with Arkansas
Location: Microsoft Teams Meeting

Start: Thu 8/6/2020 9:00 AM
End: Thu 8/6/2020 10:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Walker Williamson

-----Original Appointment-----

From: Walker Williamson [<mailto:walker.williamson@tceq.texas.gov>]

Sent: Tuesday, July 14, 2020 11:00 AM

To: Walker Williamson; Tonya Baer; Laurie Barker; Steven Hagood; Donna Huff; Vincent Meiller; Stephanie Shirley; Guy Hoffman; Daphne McMurrer; John Minter; Amy Browning; Frances Nikki Clark; Javier Galvan; Margaret Earnest; Kristin Jacobsen; Bob Gifford; Jocelyn Mellberg; Shantha Daniel; Treece, Tricia; Jobe, Kelly; Droke, Erika; Montgomery, William; Clark, David; Hossan, Iqbal

Cc: Adena Whitton; Tiffany Smith; Jill Dickey

Subject: TCEQ Regional Haze Consultation Call with Arkansas

When: Thursday, August 6, 2020 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

This meeting will be an update to the April 6, 2020 consultation call hosted by the TCEQ, which provided information on the TCEQ's selection of sources for four-factor analysis, modeling results for Class I areas in and around Texas, and the TCEQ's schedule for development of the Texas Regional Haze SIP revision for the second planning period.

TCEQ staff will provide a presentation using Microsoft Teams to facilitate the discussion. To help the meeting go as smoothly as possible, please mute your microphone unless you are speaking and turn your camera off.

[Join Microsoft Teams Meeting](#)

[Learn more about Teams](#) | [Meeting options](#)

Droke, Erika

From: Medina, Dayana <Medina.Dayana@epa.gov>
Sent: Thursday, July 16, 2020 2:30 PM
To: Treece, Tricia; Clark, David; Cooper Garbe; Melanie Foster; Walker Williamson; vennetta.hayes@la.gov; Kelly Peterson; delveccio.brown@la.gov; Ed Merta; mark.jones@state.nm.us
Cc: Huser, Jennifer; Grady, James; Feldman, Michael
Subject: RH Four Factor Analysis- Interest Rates

Colleagues:

Based on a question we received from one of our Region 6 states regarding interest rates, we consulted OAQPS and have determined that the default interest rate that should be used in cost analyses developed as part of the four factor evaluations is the bank prime rate. As a default, EPA currently recommends the use of the bank prime rate for cost analyses developed for EPA rulemakings, as this is reflective of the typical rate for borrowing among the large firms. The use of the bank prime rate is consistent with EPA's Control Cost Manual, and is discussed on pp. 15-17 of the cost estimation methodology chapter of the Manual at https://www.epa.gov/sites/production/files/2017-12/documents/epacmcostestimationmethodchapter_7thedition_2017.pdf.

As you know, the bank prime rate is variable, currently ranging from 3 to 3.25%. Therefore, when a cost analysis is prepared, we recommend that the report document the date of the analysis and the bank prime rate on the date that the analysis was prepared.

For your reference, here are some useful links on the bank prime rate:

- A link to a Federal Reserve Board table that contains today's bank prime rate at <https://www.federalreserve.gov/releases/h15/>, (called bank prime loan in the table)
- A Federal Reserve Bank graph that provides historical data on the bank prime rate back to 1955 at <https://fred.stlouisfed.org/series/PRIME>.

Thank you,

Dayana Medina

U.S. Environmental Protection Agency, Region 6
Regional Haze and SO2 Section (ARSH)
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102
214-665-7241

Droke, Erika

From: Treece, Tricia
Sent: Friday, July 17, 2020 3:14 PM
To: Droke, Erika
Subject: FW: Regional Haze Request Letter
Attachments: AR_Consultation request letter from OK.docx

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Can you add this to the list in Appendix D?

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Montgomery, William
Sent: Friday, July 17, 2020 3:10 PM
To: Treece, Tricia
Subject: Fw: Regional Haze Request Letter

William K. Montgomery | Associate Director
Division of Environmental Quality | Office of Air Quality
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682-0885 | c: 501-251-4808 | e: montgomery@adeq.state.ar.us



From: William Garbe <Cooper.Garbe@deg.ok.gov>

Sent: Friday, July 17, 2020 3:01 PM

To: Montgomery, William

Cc: Treece, Tricia

Subject: Regional Haze Request Letter

Will -

Our state consultation request letter is attached. These have not yet hit the mail, but I wanted to share with ya'll ahead of time. Let me know if you have any questions.

Thanks,

Cooper

William Cooper Garbe

Oklahoma DEQ

Air Quality - Rules and Planning

405-702-4169



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

July 17, 2020

William Montgomery, Interim Associate Director
Arkansas Department of Energy and Environment
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Subject: Oklahoma request to analyze sources for reasonable progress under the Regional Haze Rule

Dear Mr. Montgomery:

The Oklahoma Department of Environmental Quality (DEQ) is in the process of developing a state implementation plan covering the period of 2021 – 2028 under the U.S. Environmental Protection Agency's Regional Haze Rule, specifically requirements set forth in 40 C.F.R. § 51.308(f). As part of the requirements under this rule, DEQ must develop a long-term strategy for making reasonable progress at Oklahoma's Class I area, the Wichita Mountains Wilderness Area. 40 C.F.R. § 51.308(f)(2), 40 C.F.R. § 81.424.

Pursuant to 40 C.F.R. § 51.308(f)(2)(ii):

The State must consult with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area to develop coordinated emission management strategies containing the emission reductions necessary to make reasonable progress.

In its source evaluation, DEQ identified two sources located in Arkansas with SO₂ emissions that are reasonably anticipated to contribute to visibility impairment at the Wichita Mountains Wilderness Area. DEQ requests that Arkansas consider the following sources for further analysis:

- Entergy White Bluff
- Entergy Independence



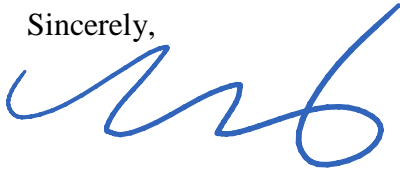
William Montgomery

July 17, 2020

Page 2

Oklahoma is requesting that the Arkansas Department of Energy and Environment continue in consultation with DEQ regarding its Regional Haze long-term strategy, and specifically any resulting analyses or measures at the above-listed sources. Should you have any questions about this request, please contact Cooper Garbe at 405-702-4169 or Melanie Foster at 405-702-4218.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kendal Stegmann', with a stylized, cursive script.

Kendal Stegmann

Director, Air Quality Division

Treece, Tricia

From: Walker Williamson <walker.williamson@tceq.texas.gov>
Sent: Wednesday, July 22, 2020 11:45 AM
To: Treece, Tricia
Subject: RE: Copy of presentation for consultation with TCEQ

I'm not really sure – I'm just trying to run down answers to some questions. I was supposed to be on that call, but I had to leave to handle something else so I don't have any notes.

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Wednesday, July 22, 2020 11:43 AM
To: Walker Williamson <walker.williamson@tceq.texas.gov>
Subject: RE: Copy of presentation for consultation with TCEQ

I don't think we mentioned anything about airports in our consultation though.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Treece, Tricia
Sent: Wednesday, July 22, 2020 11:40 AM
To: 'Walker Williamson'
Subject: RE: Copy of presentation for consultation with TCEQ

There were no airports that fell within the range of our selection metric.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Treece, Tricia
Sent: Wednesday, July 22, 2020 11:40 AM
To: 'Walker Williamson'
Subject: RE: Copy of presentation for consultation with TCEQ

No. If it was in the inventory, it was left in.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Walker Williamson [<mailto:walker.williamson@tceq.texas.gov>]
Sent: Wednesday, July 22, 2020 11:35 AM
To: Treece, Tricia
Subject: RE: Copy of presentation for consultation with TCEQ

Sorry, Tricia – one more question. Did you rule out airports as sources for four-factor analysis? We were thinking it was in your presentation (it doesn't seem to be), but some of us remembered you saying that on the call.

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Wednesday, July 22, 2020 10:33 AM
To: Walker Williamson <walker.williamson@tceq.texas.gov>
Subject: RE: Copy of presentation for consultation with TCEQ

See attached for an updated version that reflects our change to a 2016 year for source selection.

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Walker Williamson [<mailto:walker.williamson@tceq.texas.gov>]
Sent: Wednesday, July 22, 2020 10:29 AM
To: Treece, Tricia
Subject: Copy of presentation for consultation with TCEQ

Good morning Tricia,

Do you happen to have a copy of the presentation y'all shared with TCEQ this winter (I'm not sure exactly when it was)? We're having trouble accessing our shared folders on our servers at work.

Thanks,

Walker Williamson
Senior Project Manager, Air Quality Division
Texas Commission on Environmental Quality
(512) 239-3181



How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

Treece, Tricia

From: Dindarloo, Saeid <Saeid.Dindarloo@dnr.mo.gov>
Sent: Monday, August 3, 2020 11:58 AM
To: Treece, Tricia
Cc: Wilbur, Emily; Leath, Mark; Alsharafi, Adel
Subject: Request for discussing Arkansas plans for reasonable progress analysis under the regional haze rule

Tricia,

Missouri Department of Natural Resources (DNR) is in the process of developing its State Implementation Plan (SIP) for the Second Implementation Period under the Regional Haze Rule,

for Mingo and Hercules-Glades wilderness areas.

The states in the Central States Air Resources Agencies (CenSARA) organization, which includes

Missouri, contracted with Ramboll US Corporation (Ramboll) to produce a study examining the

impact of point sources of NO_x and SO₂ on each Class I area in the central region of the United

States and nearby states. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from

sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of

influence (AOI) for each Class I area, which shows the geographic areas with a high probability of

contributing to anthropogenic visibility impairment.

Based on the results of the AOI study, DNR has identified the following sources in your state that are reasonably anticipated to impact visibility conditions at Mingo and Hercules-Glades wilderness areas.

Entergy Arkansas Inc-Independence Plant

Entergy Ark-White Bluff

Futurefuel Chemical Company

Flint Creek Power Plant (SWEPCO)

We would like to discuss, with you, your state's plans for a reasonable progress analysis for the mentioned facilities in order to determine whether it would be feasible for the facilities to reduce their SO₂ and/or NO_x emissions to improve visibility at Missouri class I areas.

Please let us know if any of the below times would work with your schedule to hold a conference call, and we will send you an outlook invitation with instructions to connect to the call. All times are CST.

Thursday 8/6- 1:30-2:30 pm

Monday 8/11- 10-11 am

Thursday 8/13- 1:30-2:30 pm

Thanks,
Saeid

Saeid Dindarloo, Ph.D., E.I.T.
Air Pollution Control Program

Missouri Department of Natural Resources
Phone: 573-522-3348
Email: Saeid.Dindarloo@dnr.mo.gov

Droke, Erika

From: Wilbur, Emily <emily.wilbur@dnr.mo.gov>
Sent: Thursday, August 6, 2020 1:58 PM
To: Treece, Tricia; Dindarloo, Saeid; Leath, Mark; Alsharafi, Adel; Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: Re: Arkansas plans for reasonable progress analysis under the regional haze rule

Thanks, Tricia! We appreciate the follow-up. Have a good rest of the week!

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Thursday, August 6, 2020 1:55 PM
To: Dindarloo, Saeid; Wilbur, Emily; Leath, Mark; Alsharafi, Adel; Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly; Hossan, Iqbal
Subject: RE: Arkansas plans for reasonable progress analysis under the regional haze rule

The Information Collection Requests that we sent to the facilities and their responses are posted in the dropdown box at the following link.

<http://www.adeq.state.ar.us/air/planning/sip/regional-haze.aspx#collapseGuidance>

Tricia Treece | SIP/Planning Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



-----Original Appointment-----

From: Dindarloo, Saeid [<mailto:Saeid.Dindarloo@dnr.mo.gov>]
Sent: Monday, August 3, 2020 2:10 PM
To: Dindarloo, Saeid; Treece, Tricia; Wilbur, Emily; Leath, Mark; Alsharafi, Adel; Montgomery, William; Clark, David; Droke, Erika; Jobe, Kelly
Subject: Arkansas plans for reasonable progress analysis under the regional haze rule
When: Thursday, August 6, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).
Where:

-- Do not delete or change any of the following text. --

To avoid busy signals, please use the "Call Me" option when joining the meeting from your computer or the WebEx app on your smartphone.

Large groups and low bandwidth locations should utilize conference rooms equipped with PC/laptop, speakers, and a projector.

Click the link provided below to access The Meeting Center 'Quick Start' page requiring your name and email address. Staff connecting individually from their desktop should select the "Connect to Audio Icon" and choose the "Call Using Computer" option utilizing internal or external speaker(s). Choose the "Call Me" option if your device does not have internal or external speakers and enter your desk phone or mobile device number. The WebEx software will dial your number automatically to avoid long distance charges. When opening the WebEx invitation from the calendar on a State issued iPhone, you will see a red phone icon to the right of the WebEx Meet line. Clicking on this icon will open the WebEx application on your phone so you can connect to the meeting.

WebEx now has a mandatory password requirement for all conferences and the password is included in the invitation. Using the methods described above will not require you to enter the password.

Example:

Meeting number (access code): 123 456 7890

Meeting password: vVmiAPmx333

The "I will call in" option should only be used if the above options are unavailable due to long distance charges being incurred.

You may encounter a busy signal if you dial in instead of using the "Call Me" option.

For larger group conferences or conferences with a presenter, please remember to mute your audio to avoid interrupting the session.

Use the Chat Feature during the meeting if you have questions. Meeting host will monitor chat session. If there are any issues during the call, please contact ITSD.

[Join Webex Meeting](#)

Meeting number (access code): 133 923 6320 Meeting password: s9PKqmxTc25

Join from a video system or application

Dial [1339236320@stateofmo.webex.com](tel:1339236320)

You can also dial 173.243.2.68 and enter your meeting number.

Tap to join from a mobile device (attendees only)

[+1-650-479-3207,,1339236320##](#) Call-in toll number (US/Canada)

Join by phone

1-650-479-3207 Call-in toll number (US/Canada)

[Global call-in numbers](#)

[Can't join the meeting?](#)

If you are a host, [click here](#) to view host information. IMPORTANT NOTICE: Please note that this Webex service allows audio and other information sent during the session to be recorded, which may be discoverable in a legal matter. By joining this session, you automatically consent to such recordings. If you do not consent to being recorded, discuss your concerns with the host or do not join the session.

Treece, Tricia

From: William Garbe <Cooper.Garbe@deq.ok.gov>
Sent: Friday, September 4, 2020 3:42 PM
To: Treece, Tricia
Cc: Montgomery, William; Melanie Foster
Subject: Western Farmers Hugo Power Plant 4-factor analysis
Attachments: Western Farmers_Hugo_Response.pdf

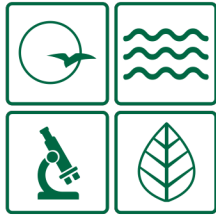
Tricia,

Please find the Western Farmers Hugo Power Plant 4-factor analysis attached. We have just begun our review of this document and will keep you updated on our process. After your review if you have any follow-up questions for Western Farmers please let me know and we will package a response document to send off to them.

Thanks,
Cooper

William Cooper Garbe

Oklahoma DEQ
Air Quality - Rules and Planning
405-702-4169



Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Michael L. Parson, Governor Carol S. Comer, Director

September 11, 2020

William Montgomery
Associate Director
Office of Air Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality
Email: Montgomery@adeq.state.ar.us

Sent Via Electronic Mail

Dear William Montgomery

The Missouri Department of Natural Resources' Air Pollution Control Program (Air Program) is in the process of developing Missouri's State Implementation Plan (SIP) for the Second Implementation Period under the Regional Haze Rule, which is due on July 31, 2021. The SIP must address reasonable progress in mitigating visibility impairment in federal Class I areas from air pollution sources. There are two federal Class I areas located in Missouri, including the Mingo National Wildlife Refuge (Mingo) and the Hercules-Glades Wilderness area (Hercules-Glades).

The key air pollutants from anthropogenic sources impairing visibility at Mingo and Hercules-Glades are ammonium sulfate and ammonium nitrate. Ammonium sulfate is formed by chemical reactions between ammonia and sulfur dioxide (SO_2) in the atmosphere. Ammonium nitrate is formed by chemical reactions between ammonia and nitrogen oxides (NO_x) in the atmosphere. U.S. Environmental Protection Agency (EPA) modeling projects that these two pollutants will continue to be the key pollutants contributing to visibility impairment at Missouri's Class I areas in 2028, which is the future year being evaluated in this Regional Haze SIP.

The states in the Central States Air Resources Agencies (CENSARA) organization, which includes Missouri, contracted with Ramboll US Corporation to produce a study examining the impact of point sources of NO_x and SO_2 on each Class I area in the central region of the United States and nearby states. For each Class I area, the study took into account light extinction-weighted wind trajectory residence times, 2016 sulfur dioxide and nitrogen oxides facility emissions, and distance from sources of nitrogen oxides and sulfur dioxide to Class I Areas. The study produced an area of influence (AOI) for each Class I area, which shows the geographic areas with a high probability of contributing to anthropogenic visibility impairment.



Based on the results of the AOI study, the Air Program performed a screening analysis to identify specific sources in Missouri and other states that warrant further analysis and evaluation for potential emission controls. As discussed with your staff during a phone call on August 6, 2020, the Air Program's screening analysis identified the following sources in your state that are reasonably anticipated to impact visibility conditions at the Class I area(s) indicated.

Entergy Arkansas Inc-Independence Plant	(Class I areas: Mingo and Hercules-Glades)
Entergy Ark-White Bluff	(Class I area: Hercules-Glades)
Futurefuel Chemical Company	(Class I area: Hercules-Glades)
Flint Creek Power Plant (SWEPCO)	(Class I area: Hercules-Glades)

Therefore, the Air Program requests that Arkansas consider whether performing a four-factor analysis is appropriate for each of these sources in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for sulfur dioxide or nitrogen oxides are necessary to make reasonable progress towards natural visibility at the applicable Missouri Class I areas during the second planning period.

We look forward to working with you on this important effort. We request that you share with the Air Program your determinations and reasoning for performing or not performing a four-factor analysis on each of the above-listed sources. For any of these sources in which Arkansas performs a four-factor analysis, the Air Program requests that Arkansas share the results of the analysis, including any technical supporting documentation, and provide an opportunity for consultation on the analysis, your state's long-term strategy, and the anticipated impact on visibility in Missouri's Class I areas.

Thank you for your attention to this matter. If you have any questions, please contact Emily Wilbur with the Missouri Department of Natural Resources' Air Pollution Control Program at P.O. Box 176, Jefferson City, MO 65102, at (emily.wilbur@dnr.mo.gov) or by telephone at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Darcy A. Bybee
Director

DAB:sdc

c: Tricia Treece, Arkansas Division of Environmental Quality (treecep@adeq.state.ar.us)

Treece, Tricia

From: Walker Williamson <walker.williamson@tceq.texas.gov>
Sent: Friday, September 18, 2020 1:11 PM
To: William Garbe; Jones, Mark, NMENV; Treece, Tricia; Wilbur, Emily; Leath, Mark; Alsharafi, Adel; mvince@censara.org; Singleton, Kerwin, NMENV; Baca, Michael, NMENV; Kuehn, Elizabeth, NMENV
Cc: Margaret Earnest; Kristin Jacobsen; Stephanie Shirley
Subject: Texas Regional Haze SIP Revision Documents Available

All,

The backup materials for the TCEQ commissioners' October 7 agenda meeting are now publicly available. All documentation the commission will consider for proposal is available at https://www.tceq.texas.gov/airquality/sip/bart/haze_sip.html. If approved by the commission, these documents will be made available for public comment.

Please let me know if you have any questions.

Walker Williamson
Senior Project Manager, Air Quality Division
Texas Commission on Environmental Quality
(512) 239-3181



How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey



Outreach and Consultation Four-Factor Analysis

Office of Air
Air Quality Division

August 3, 2020



Outline

- Background
- Screening for Four-Factor Analysis
- Four-Factor Analysis
- Sensitivity Analysis
- Summary
- Next Steps



Background

- The Regional Haze Rule (RHR, 40 CFR 51.308(f)(1)(vi)(B)) requires State Implementation Plans (SIP) that evaluate reasonable progress toward improved visibility at Class I areas.
- The next Regional Haze SIP is due in July 2021.

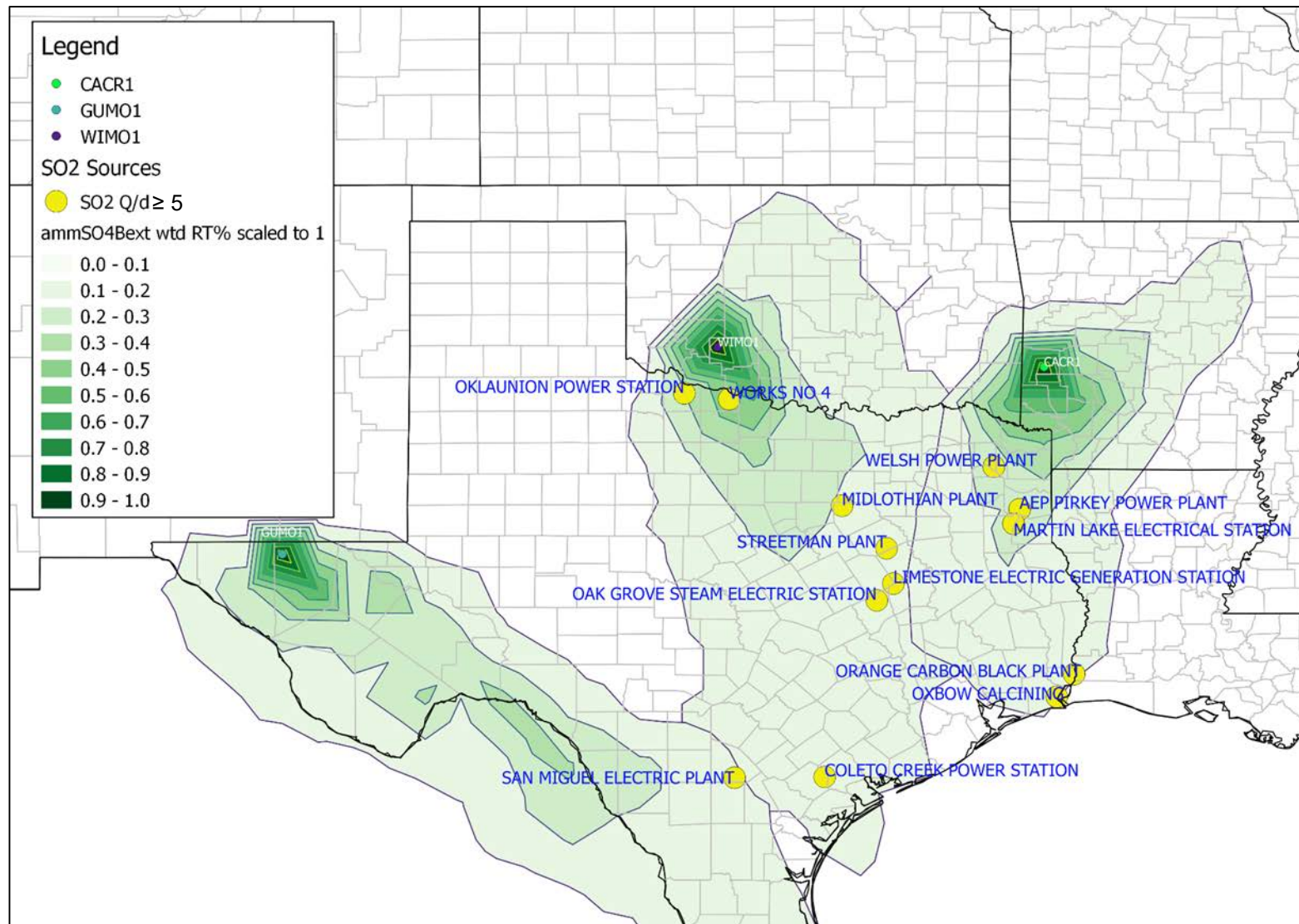


Source Screening

- The EPA recommends that reasonably projected actual emissions in 2028 be used to select sources for four factor analysis.
- Point sources that report to the State of Texas Air Reporting System (STARS) were analyzed.
 - For Electric Generating Units (EGU):
 - Combined 2018 actual emissions and Eastern Regional Technical Advisory Committee (ERTAC) 2028 projections.
 - For other point sources:
 - 2016 data from STARS with growth factors applied.
- Sources potentially contributing to visibility impairment at each Class I area in Texas and neighboring states (NM; OK; AR) were identified using a $Q/d \geq 5$ threshold paired with Extinction Weighted Residence Times.
 - Sources were selected for four-factor analysis on an individual-pollutant basis (SO_2 or NO_x).

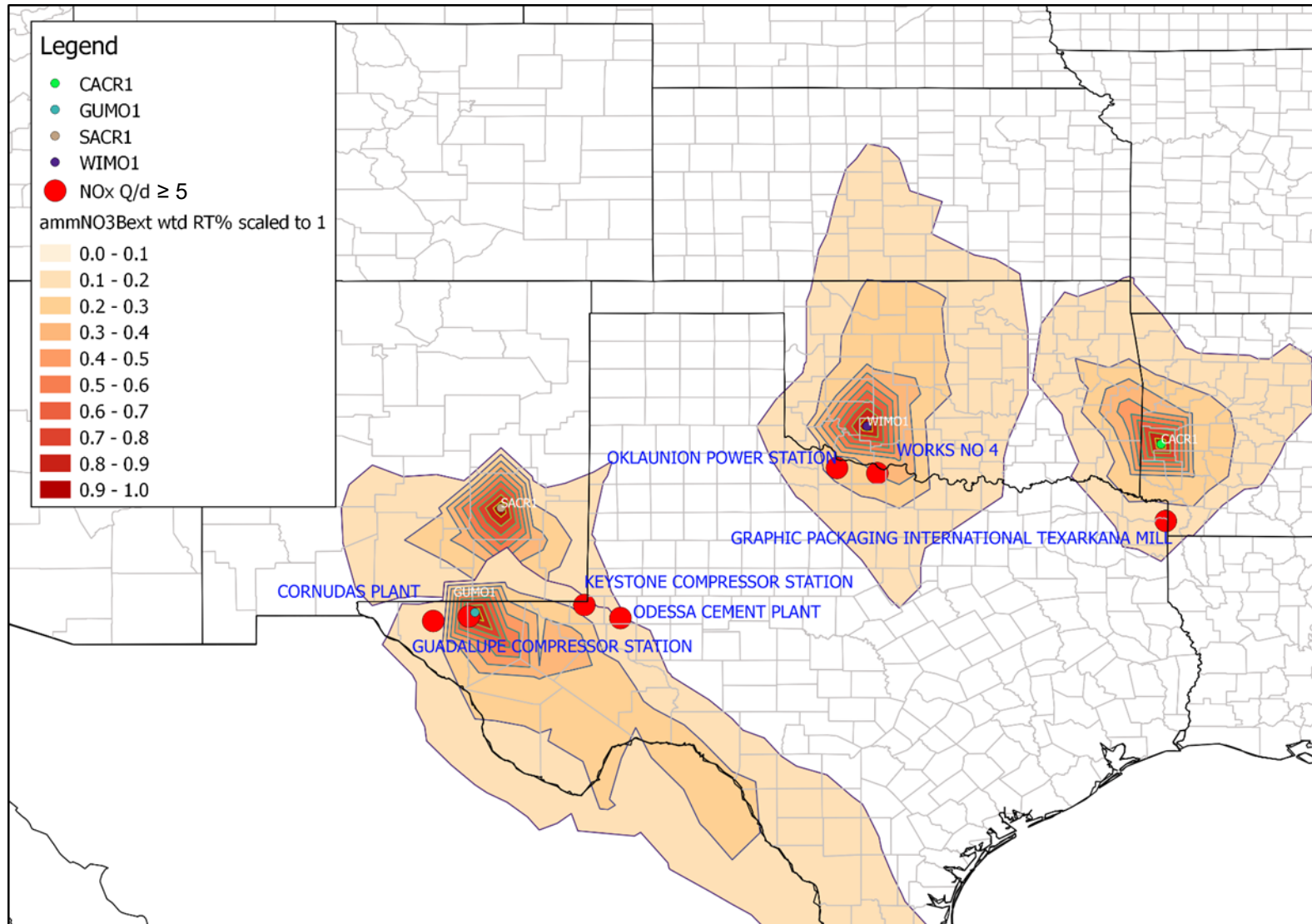


Sulfur Dioxide Sources Selected for Four-Factor Analysis





Nitrogen Oxides Sources Selected for Four-Factor Analysis





Four-Factor Analysis

- States must evaluate control measures for a source based on four statutory criteria to demonstrate reasonable progress toward natural visibility conditions at a Class I area (40 CFR § 51.308(f)(2)(i)):
 - Cost of compliance
 - Time necessary for compliance
 - Energy and non-air quality environmental impacts of compliance
 - Remaining useful life of the source
- Reasonable progress is not specifically defined by the Federal Clean Air Act, the RHR, or guidance from the EPA.
- The RHR requires these four criteria be applied to any potentially affected anthropogenic source of visibility impairment.
- EPA guidance allows potential visibility improvement resulting from emissions reductions to be considered.



Four-Factor Analysis

- Baseline emissions were used to evaluate potential control measures for each source selected.
 - Non-EGUs
 - 2016 TCEQ Point Source Emissions Inventory
 - EGUs
 - 2018 EPA Clean Air Markets Division, Air Markets Program Data, and Energy Information Administration supporting information
- Only control technologies demonstrated as technically feasible for units at each source type were considered and evaluated.
 - Three sources in analysis for which no demonstrated controls were identified.
- Scrubber upgrades were considered for coal-fired EGUs already equipped with scrubbers.



Four-Factor Analysis

- Combustion modification techniques and post-combustion (add-on) controls evaluated for sources selected based NO_x emissions
 - Low-emission combustion (LEC) retrofit for stationary reciprocating engines
 - Low- NO_x burners for stationary gas turbines
 - Selective Catalytic Reduction (SCR)
 - Selective Non-Catalytic Reduction (SNCR)
- Post-combustion (add-on) controls evaluated for sources selected based on SO_2 emissions
 - Dry-sorbent injection (DSI)
 - Dry scrubbers (e.g. spray dry absorbers (SDA))
 - Wet scrubbers (e.g. limestone systems)
- Combined post-combustion (Tri-Mer) control device evaluated for one source
 - Device relies on a reducing reagent and a catalyst for NO_x control, a reducing reagent for SO_2 control, and a fabric filter for collection of SO_2 and PM particles



Four-Factor Analysis

- A cost threshold of \$5,000/ton for NO_x and SO₂ reduced was used to further to identify sources to which potential control measures could be applied in a cost-effective manner.
 - Capital recovery factor of 15 years was used to estimate annualized capital costs for each potential control measure.
 - Expected control efficiencies of potential control measures were applied to baseline emissions for estimated NO_x and/or SO₂ emissions reduced.
 - Total annualized costs were divided by expected emissions reduced for each measure to arrive at cost per ton estimates.
- After applying the \$5,000/ton threshold, additional controls were further considered for 11 of the 18 sources.



Four-Factor Analysis

- The other three statutory factors were evaluated but no single factor was considered to have strongly influenced the results.
- Emissions reductions for the 11 sources with potential controls that were less than the \$5,000/ton threshold were included in a sensitivity modeling analysis to evaluate the potential visibility improvement.
 - Measures with highest expected control were used if multiple control measures had costs equal to or less than \$5,000/ton.



Four-Factor Analysis

Company/Site Name	Unit(s)	Controls Evaluated	Class I Area(s)	Pollutant(s)	Included in Sensitivity Analysis?
Coletto Creek Power/Coletto Creek Power Station	(1) coal boiler	Wet Scrubber DSI SDA	Wichita Mountains	SO ₂	Yes- wet scrubber
Southwestern Electric Power/Welsh Power Plant	(2) coal boilers	Wet scrubber DSI SDA	Caney Creek & Wichita Mountains	SO ₂	Yes - both boilers - DSI
AEP/Pirkey Power Plant	(1) coal boiler	Scrubber Upgrade	Caney Creek & Wichita Mountains	SO ₂	Yes
NRG Energy/Limestone Electric Generating Station	(2) coal boilers	Scrubber Upgrade	Wichita Mountains	SO ₂	No - costs for boilers above \$5k/ton, each
Vistra Energy/Martin Lake Electric Station	(3) coal boilers	Scrubber Upgrade	Caney Creek (AR) & Wichita Mountains	SO ₂	Yes - all 3 boilers
San Miguel Electric Cooperative/San Miguel Elec. Plant	(1) coal boiler	Scrubber Upgrade	Guadalupe Mountains & Wichita Mountains	SO ₂	Yes
Public Service Co. of Oklahoma/Oklaunion Power Station	(1) coal boiler	SO ₂ - Scrubber Upgrade NO _x - SNCR, SCR	Wichita Mountains	SO ₂ & NO _x	Yes – shutdown modeled; however, costs were above threshold of \$5k/ton for SO ₂ & NO _x , each
Vistra Energy/Oak Grove Steam Electric Station	(2) coal boilers	None - each boiler already operating wet scrubber at 98% control for SO ₂	Wichita Mountains	SO ₂	No
Holcim Texas LP/Midlothian Plant	(2) cement kilns	Scrubber Upgrades	Wichita Mountains	SO ₂	Yes - both kilns
Vitro Flat Glass/Works No. 4 Wichita Falls Plant	(2) glass melting furnaces	Tri-Mer	Wichita Mountains	SO ₂ & NO _x	Yes - for Kiln No. 2 only, SO ₂ and NO _x ; costs for Kiln No. 1 above \$5k/ton



Four-Factor Analysis

Company/Site Name	Unit(s)	Controls Evaluated	Class I Area(s)	Pollutant(s)	Included in Sensitivity Analysis?
Graphic Packaging International/ Texarkana Mill	(4) boilers: (2) black liquor solids & NG (1) NG & fuel oil (1) NG, fuel oil, & other materials	Boilers – LNB and SCR	Caney Creek	NO _x	Yes – LNB for (2) black liquor solids and NG and (1) NG, fuel oil, and other materials boilers; costs for remaining boiler above \$5k/ton
El Paso Natural Gas Co./Keystone Compressor Station	(15) reciprocating engines	LEC and SCR (except for engines with emissions too low)	Guadalupe Mountains & Salt Creek	NO _x	Yes – LEC for (6) engines; costs for remaining engines above \$5k/ton or emissions too low
El Paso Natural Gas Co./Cornudas Plant	(6) turbines	(4) LNB or SCR (2) Turbines already equipped with LNB; only SCR evaluated	Guadalupe Mountains	NO _x	Yes – LNB for (4) turbines; cost for remaining turbines above \$5k/ton
El Paso Natural Gas Co./Guadalupe Compressor Station	(1) turbine	LNB and SCR	Guadalupe Mountains	NO _x	No - costs above \$5k/ton
GCC Permian/Odessa Cement Plant	(2) cement kilns	LNB in addition to SNCR on Kiln No. 2	Guadalupe Mountains	NO _x	Yes - Kiln No. 2 only; Kiln No. 3 (to replace Kiln No. 1) permitted w/ SNCR as BACT



Four-Factor Analysis

Company/Site Name	Unit(s)	Class I Area(s)	Pollutant(s)	Included in Sensitivity Analysis?
Orion Engineered Carbons/Orange Carbon Black Plant	(1) incinerator; (4) dryers; (2) tail gas and NG boilers; (1) flare	Caney Creek	SO ₂	No - no demonstrated additional SO ₂ control technology identified
Oxbow Calcining/Oxbow Calcining-Port Arthur	(4) coke calcining kilns	Caney Creek	SO ₂	No - no demonstrated additional SO ₂ control technology identified
Trinity Lightweight Aggregate (TRNLWS)/Streetman Plant	(1) lightweight aggregate kiln	Wichita Mountains	SO ₂	No – no demonstrated additional SO ₂ control technology identified



Four-Factor Analysis

- Total potential emissions reductions and costs for each pollutant identified using the \$5,000/ton threshold

	Total Emission Reductions (tons per year)	Total Capital Cost	Total Annualized Costs
NO _x	3,171	\$39,321,201	\$9,335,087
SO ₂	79,285	\$877,247,036	\$195,539,404



Sensitivity Analysis

Scenario	Name	Description
1	ZeroOKU	Removal of the Oklaunion Power Station
2	ZeroOKU &SO ₂	In addition to Scenario 1, SO ₂ reductions at specific sources
3	ZeroOKU &SO ₂ &NO _x	In addition to Scenario 2, NO _x reductions at specific sources

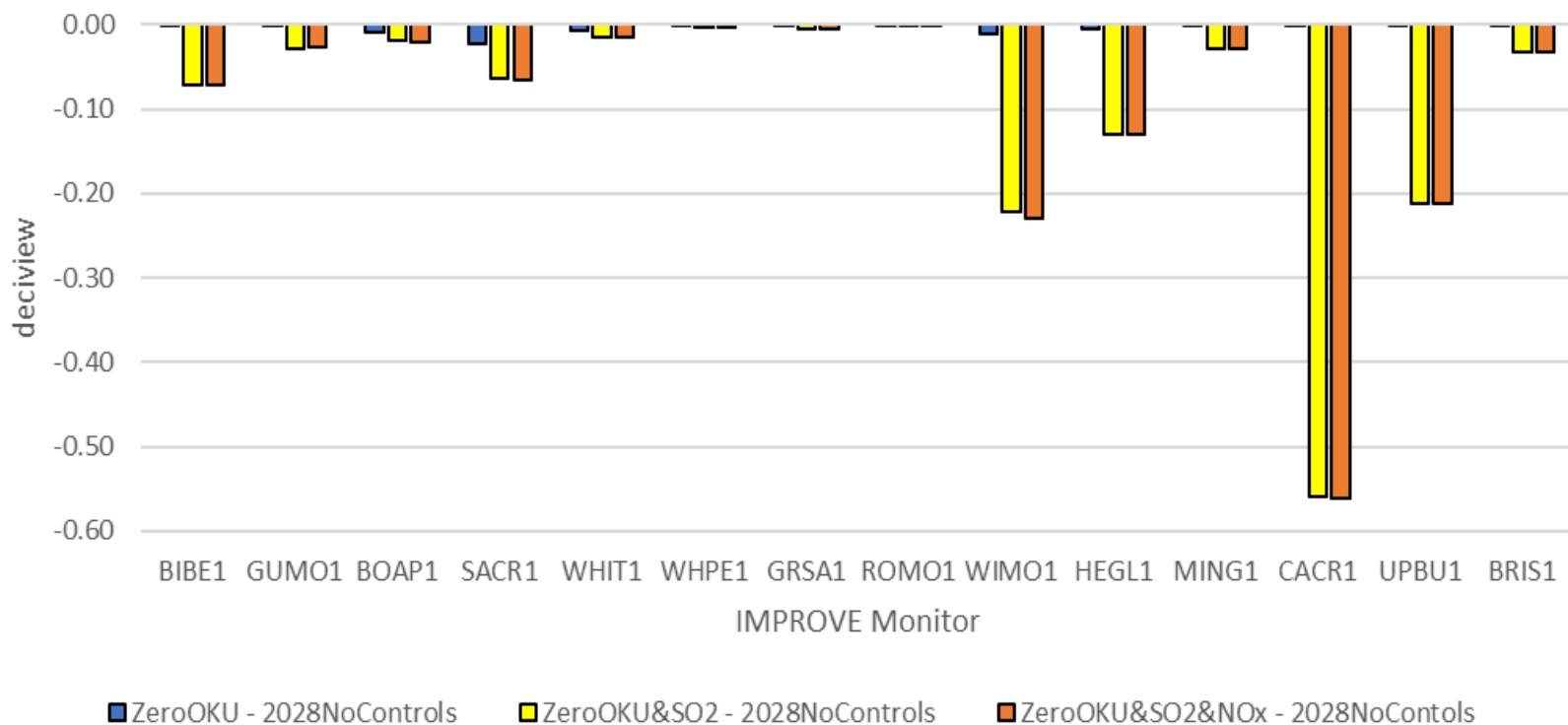
Modeled Texas Emissions of NO_x and SO₂ for Sensitivity Analysis Scenarios

Scenario	Non-EGU NO _x (tpd)	Non-EGU SO ₂ (tpd)	EGU NO _x (tpd)	EGU SO ₂ (tpd)	Total NO _x (tpd)	Total SO ₂ (tpd)
2028NoControl	434.1	220.6	346.1	748.1	780.2	968.7
Scenario 1 ZeroOKU	434.1	220.6	323.0	740.2	757.1	960.8
Scenario 2 ZeroOKU &SO ₂	434.1	217.1	323.0	502.8	757.1	719.9
Scenario 3 ZeroOKU &SO ₂ &NO _x	423.0	217.1	323.0	502.8	746.0	719.9

Example day: June 14, 2028



Visibility Impairment Reductions due to Controls



	BIBE	GUMO	BOAP	SACR	WHIT	WHPE	GRSA	ROMO	WIMO	HEGL	MING	CACR	UPBU	BRIS
ZeroOKU	0.00	0.00	-0.01	-0.02	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
ZeroOKU &SO ₂	-0.07	-0.03	-0.02	-0.06	-0.01	0.00	-0.01	0.00	-0.22	-0.13	-0.03	-0.56	-0.21	-0.03
ZeroOKU &SO ₂ &NO _x	-0.07	-0.03	-0.02	-0.07	-0.02	0.00	-0.01	0.00	-0.23	-0.13	-0.03	-0.56	-0.21	-0.03



Summary

- Based on Areas of Influence (EWRT) and Q/d screening, 18 sources were identified for four-factor analysis.
- A cost threshold of \$5,000/ton for NO_x and SO_2 reduced was used to further identify sources to which potential control measures could be applied in a cost-effective manner.
- Sensitivity analysis was conducted to evaluate the potential visibility improvements of identified control options.
 - Scenario 1: A change of 0.0112 dv, is seen at the Wichita Mountains Wilderness Area in Oklahoma. This monitor is the closest to the Oklaunion Power Station where the reductions occur.
 - Scenario 2: The maximum improvement of modeled reductions in SO_2 is at Caney Creek with 0.5579 dv.
 - Scenario 3: The maximum improvement of modeled reductions in SO_2 and NO_x is at Caney Creek with 0.5611 dv.
- Total annualized costs for identified controls:
 - \$9,335,087 for NO_x
 - \$195,539,404 for SO_2



Next Steps

- Consultations with neighboring states concerning reasonable progress demonstration and four factor analysis for 2nd planning period.
- Proposal agenda for Regional Haze SIP revision anticipated October 7, 2020.
- Regional Haze SIP revision due to the EPA July 2021.



Air Quality Division

Follow us @TCEQ

Contact Information

Walker Williamson

Walker.Williamson@tceq.texas.gov

(512) 239-3181

Stephanie Shirley

Stephanie.Shirley@tceq.texas.gov

(512) 239-1906

Legend

● UPBU1

● Q/D ≥ 5 tpy NO_x/km

AmmNO3bext wtd RT % scaled to 1

0.0 - 0.1

0.1 - 0.2

0.2 - 0.3

0.3 - 0.4

0.4 - 0.5

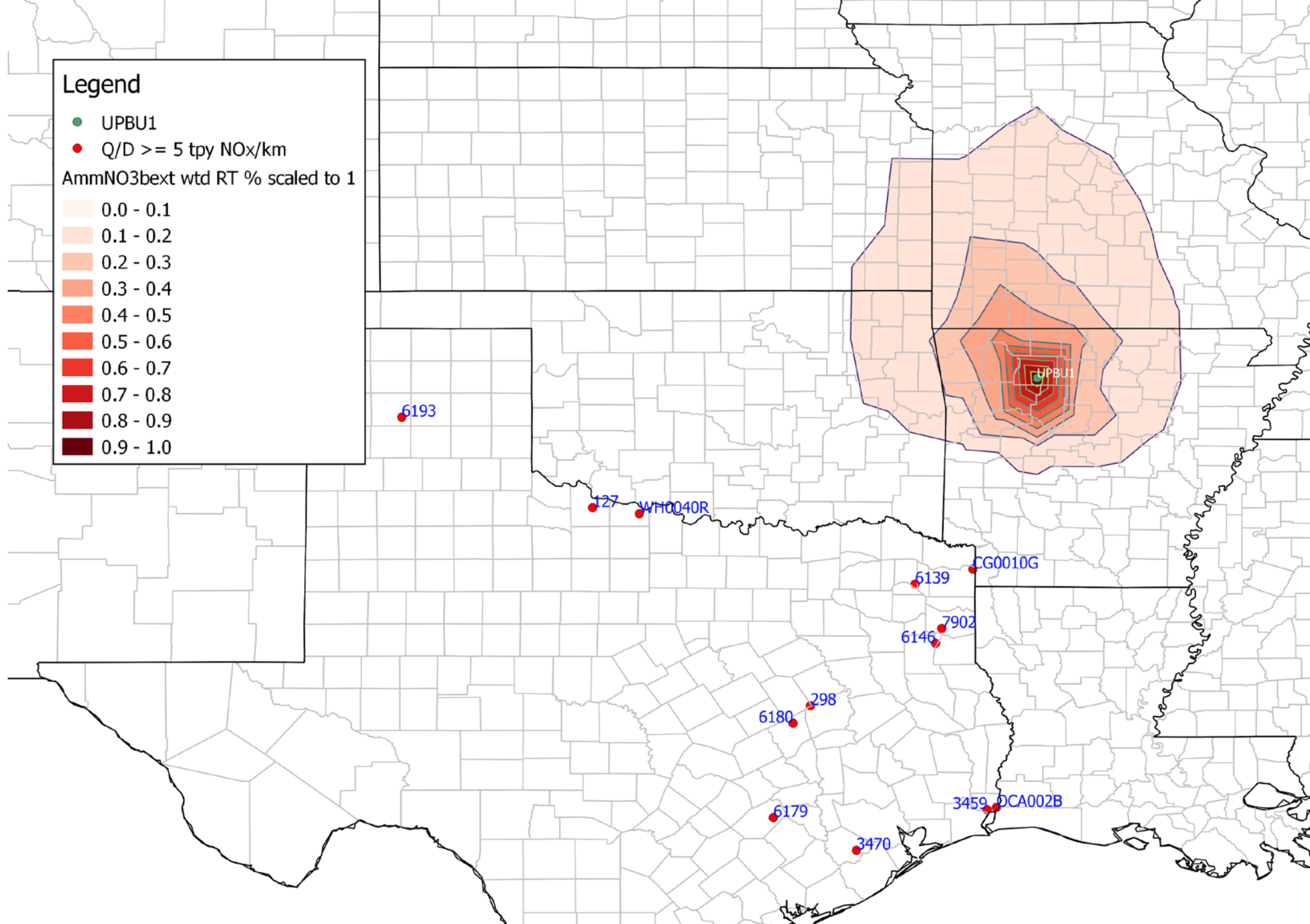
0.5 - 0.6

0.6 - 0.7

0.7 - 0.8

0.8 - 0.9

0.9 - 1.0

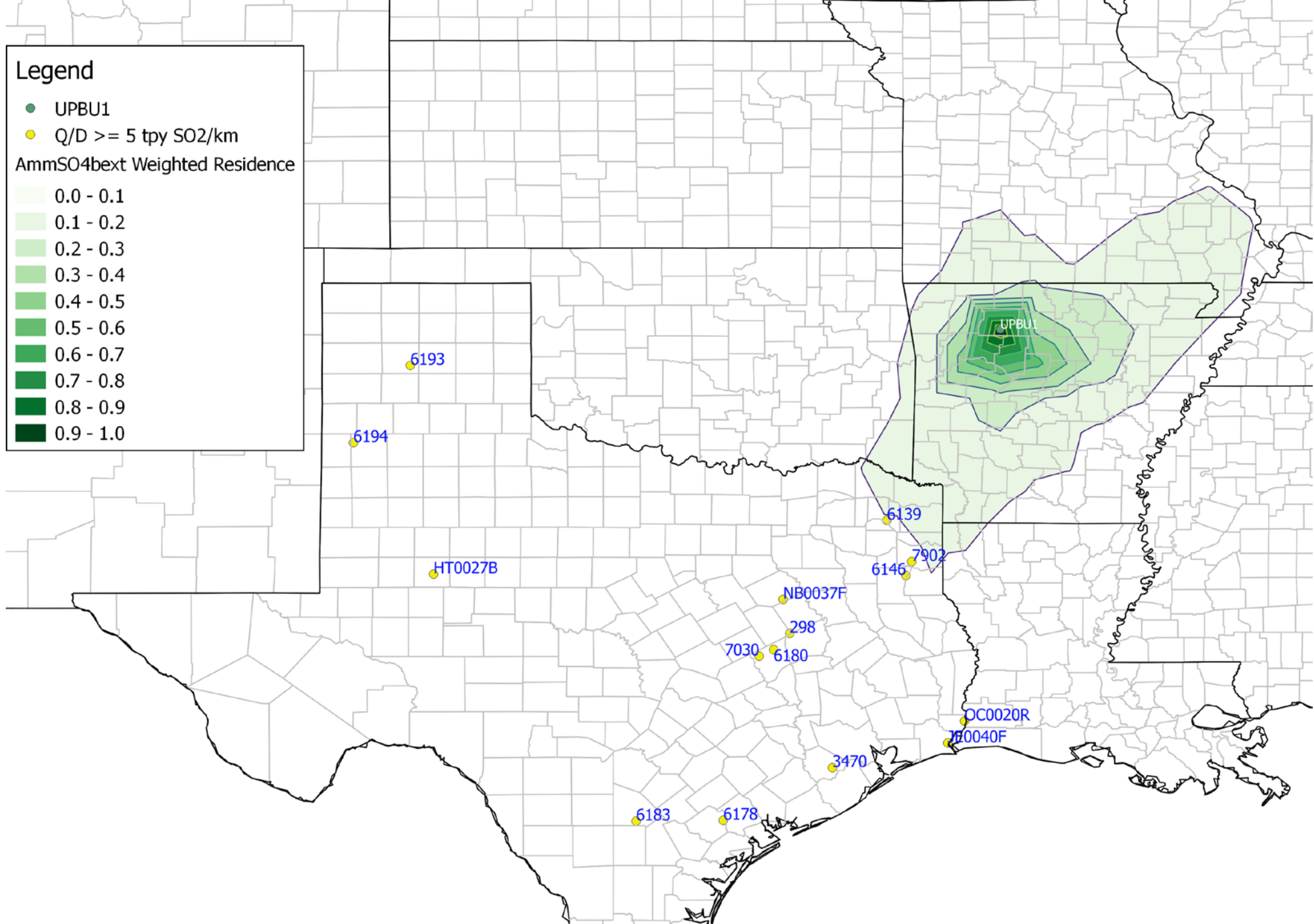


Legend

- UPBU1
- Q/D ≥ 5 tpy SO₂/km

AmmSO4bext Weighted Residence

- 0.0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- 0.9 - 1.0



Legend

● UPBU1

● Q/D ≥ 5 tpy SO₂/km

AmmSO₄bext Weighted Residence

0.0 - 0.1

0.1 - 0.2

0.2 - 0.3

0.3 - 0.4

0.4 - 0.5

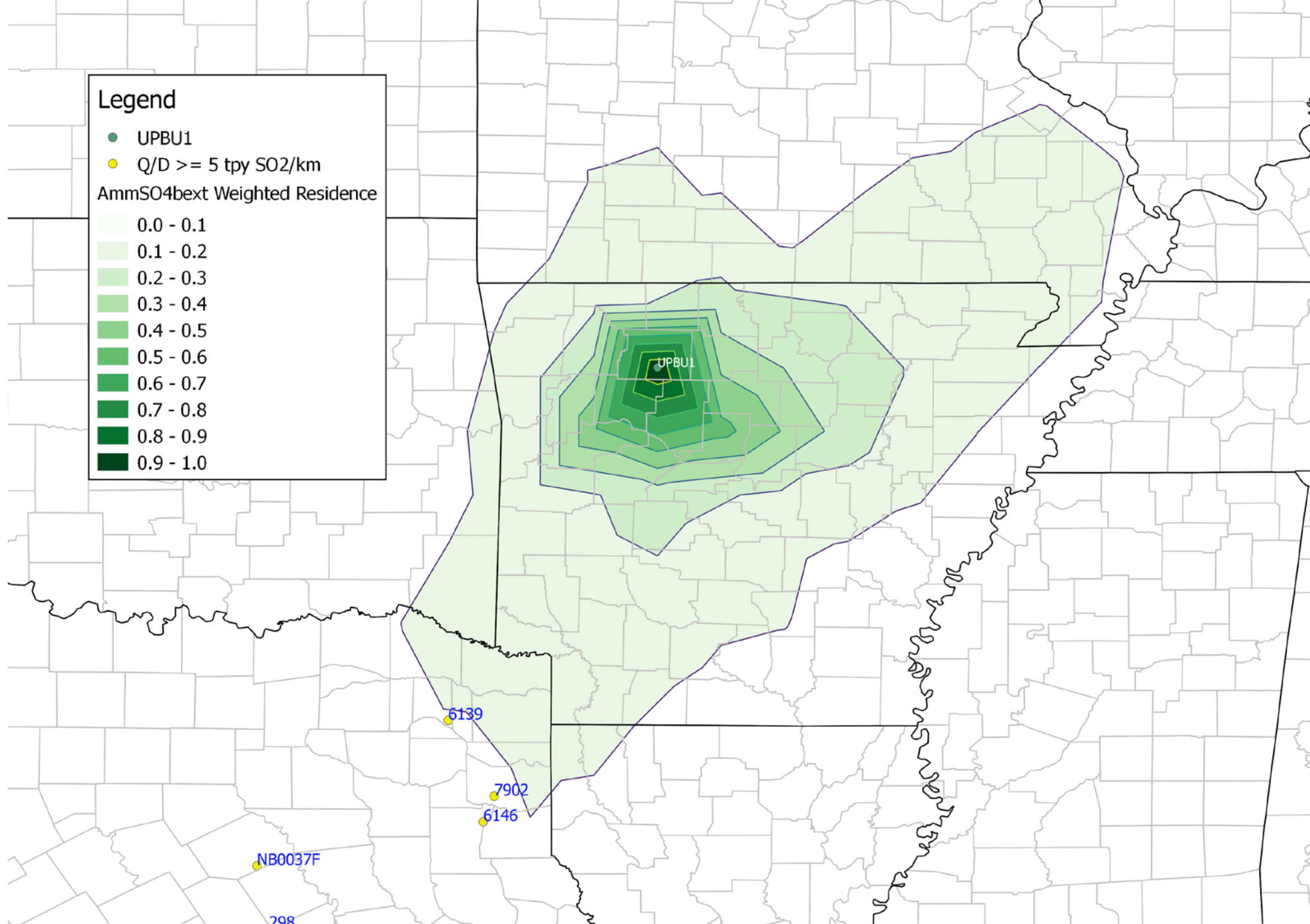
0.5 - 0.6

0.6 - 0.7

0.7 - 0.8

0.8 - 0.9

0.9 - 1.0



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 6:13 PM
To: 'walker.williamson@tceq.texas.gov'
Cc: Stephanie Shirley (Stephanie.Shirley@Tceq.Texas.Gov); 'kristin.jacobsen@tceq.texas.gov'; Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_TXSigned.pdf

Walker,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 6:11 PM
To: William Garbe (Cooper.Garbe@deq.ok.gov)
Cc: 'Melanie.foster@deq.ok.gov'; Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_OK Signed.pdf

Cooper,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 6:09 PM
To: 'Michael.Abraczinskas@ncdenr.gov'
Cc: 'randy.strait@ncdenr.gov'; 'clafontaine@metro4-sesarm.org'; Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_NC Signed.pdf

Mr. Abraczinskas,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 6:16 PM
To: Medina, Dayana (Medina.Dayana@epa.gov)
Cc: 'feldman.michael@epa.gov'; Clark, David; Montgomery, William
Subject: Arkansas Regional Haze Pre-Proposal Draft Documents

Dayana,
We just sent letters to the federal land managers and affected states providing them the opportunity to discuss our pre-proposal draft documents for the Arkansas Regional Haze Planning Period II SIP revision. We would also like to provide these documents to EPA Region 6. Please let us know by April 30, 2021 if you have any feedback that you would like to provide on our pre-proposal documents. These documents are available at:
<https://1drv.ms/f/s!AtaMFQw8GYddgWVKkz-quTL2xT6f>.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 6:05 PM
To: Peters, Melanie (melanie_peters@nps.gov)
Cc: Kirsten King (kirsten_king@nps.gov); Don Shepherd (don_shepherd@nps.gov)
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_National Park Service Signed.pdf

Melanie,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:56 PM
To: Delveccio Brown (Delveccio.Brown@LA.GOV)
Cc: Vivian Johnson (DEQ) (Vivian.Johnson2@la.gov); Vennetta Hayes (Vennetta.Hayes@LA.GOV); Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_LA Signed.pdf

Ms. Brown,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:58 PM
To: Leath, Mark (mark.leath@dnr.mo.gov)
Cc: Wilbur, Emily (emily.wilbur@dnr.mo.gov); Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_MO Signed.pdf

Mark,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:55 PM
To: 'kelly.lewis@ky.gov'
Cc: Montgomery, William; Clark, David
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_KY Signed.pdf

Ms. Lewis,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:52 PM
To: 'rory.davis@illinois.gov'
Cc: Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_IEPA Signed.pdf

Mr. Davis

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:45 PM
To: 'DELONEY, SCOTT'
Cc: Montgomery, William; Clark, David
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_IDEM Signed.pdf

Mr. Deloney,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:43 PM
To: Mcneel, Pleasant - FS (pleasant.mcneel@usda.gov)
Cc: Anderson, Bret A -FS (bret.a.anderson@usda.gov); 'scott.copeland@colostate.edu'; Clark, David; Montgomery, William
Subject: RE: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

I apologize for my copy and paste error. The email below should read: Please see attached for a letter from our Office of Air Quality Associate Director inviting the US. Forest Service to review and provide feedback on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:39 PM
To: Mcneel, Pleasant - FS (pleasant.mcneel@usda.gov)
Cc: Anderson, Bret A -FS (bret.a.anderson@usda.gov); 'scott.copeland@colostate.edu'; Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Mr. McNeel

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director inviting the US. Fish and Wildlife Service to review and provide feedback on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | **Office of Air Quality**
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:39 PM
To: Mcneel, Pleasant - FS (pleasant.mcneel@usda.gov)
Cc: Anderson, Bret A -FS (bret.a.anderson@usda.gov); 'scott.copeland@colostate.edu'; Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_Forest Service Signed (2).pdf

Mr. McNeel

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director inviting the US. Fish and Wildlife Service to review and provide feedback on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:28 PM
To: tim_allen@fws.gov
Cc: Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: Formal Consultation Notification_Fish and Wildlife Service Signed.pdf

Tim,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director inviting the US. Fish and Wildlife Service to review and provide feedback on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Tim Allen
Meteorologist
United States Fish and Wildlife Service
Branch of Air Quality
7333 W. Jefferson Ave., Suite 375
Lakewood, CO 80235-2017

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Allen:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

This notification is intended to provide your agency with an opportunity for a sixty-day consultation period on this SIP revision in accordance with 40 C.F.R. § 51.308(i). This consultation will give you the opportunity to discuss your assessment of the impact of the proposed revisions on federal Class I areas in a manner consistent with 40 C.F.R. § 51.308(i).

The pre-proposal draft of the SIP revision can be accessed at <https://1drv.ms/f/s!AtaMFQw8GYddgWVKkz-quTL2xT6f>. Please note that all documents are draft working documents and are subject to change prior to finalization for proposal. If changes are made between the date of this letter and proposal, DEQ will notify you of the changes.

DEQ requests that any comments on the pre-proposal copy of the SIP revision be provided to DEQ by no later than Friday April 30, 2021.

Should you wish to schedule a meeting or have any questions, please contact Tricia Treece at treecep@adeq.state.ar.us. We request that written comments be submitted electronically by emailing treecep@adeq.state.ar.us. You may also mail comments to Tricia Treece, Office of Air

Quality, Division of Environmental Quality, Department of Energy and Environment, 5301 Northshore Drive, North Little Rock, AR 72118.

Sincerely,

A handwritten signature in black ink, appearing to read 'W.K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Pleasant McNeel
Air Resource Specialist
United States Forest Service
200 South Lamar Street, Ste. 500N
Jackson, MS 39201

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. McNeel:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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Should you wish to schedule a meeting or have any questions, please contact Tricia Treece at treecep@adeq.state.ar.us. We request that written comments be submitted electronically by emailing treecep@adeq.state.ar.us. You may also mail comments to Tricia Treece, Office of Air Quality, Division of Environmental Quality, Department of Energy and Environment, 5301 Northshore Drive, North Little Rock, AR 72118.

ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Sincerely,

A handwritten signature in black ink, appearing to read "William K. Montgomery", with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Bret Anderson, USFS National Air Modeling Coordinator
Scott Copeland, USFS Air Data Analyst



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Scott Deloney
Programs Branch Chief
Indiana Department of Environmental Management

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Deloney:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a long horizontal flourish extending to the right.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Rory Davis
Air Quality Planning
Illinois EPA

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Davis:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Kelly Lewis
Program Planning Branch Manager
Division for Air Quality
Department of Environmental Quality
Kentucky Energy and Environment

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Ms. Lewis:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Delveccio Brown
Air Planning and Assessment Division
Louisiana Department of Environmental Quality

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Ms. Brown:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a long horizontal flourish extending to the right.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Vivian Johnson
Vennetta Hayes



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Mark Leath
SIP Unit Chief
Missouri Department of Natural Resources

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Leath:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a long horizontal flourish extending to the right.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Emily Wilbur



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Melanie Peters,
United States National Park Service
Air Resources Division
PO Box 25287
Denver, CO 80225-0287

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Ms. Peters:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc:

Kirsten King, NPS
Don Shepherd, NPS



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Mike Abraczinskas
Division of Air Quality
North Carolina Department of Environmental Quality

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Abraczinskas:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

This notification is intended to provide your agency with an opportunity for a sixty-day consultation period on this SIP revision in accordance with 40 C.F.R. § 51.308(i). This consultation will give you the opportunity to discuss your assessment of the impact of the proposed revisions on federal Class I areas in a manner consistent with 40 C.F.R. § 51.308(i).

The pre-proposal draft of the SIP revision can be accessed at <https://1drv.ms/f/s!AtaMFQw8GYddgWVKkz-quTL2xT6f>. Please note that all documents are draft working documents and are subject to change prior to finalization for proposal. If changes are made between the date of this letter and proposal, DEQ will notify you of the changes.

DEQ requests that any comments on the pre-proposal copy of the SIP revision be provided to DEQ by no later than Friday April 30, 2021.

Should you wish to schedule a meeting or have any questions, please contact Tricia Treece at treecep@adeq.state.ar.us. We request that written comments be submitted electronically by emailing treecep@adeq.state.ar.us. You may also mail comments to Tricia Treece, Office of Air Quality, Division of Environmental Quality, Department of Energy and Environment, 5301 Northshore Drive, North Little Rock, AR 72118.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Randy Strait, North Carolina Department of Environmental Quality
Chad LaFontaine, Metro 4/SESARM



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Cooper Garbe
Air Quality Division
Oklahoma Department of Environmental Quality

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Garbe:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

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DEQ requests that any comments on the pre-proposal copy of the SIP revision be provided to DEQ by no later than Friday April 30, 2021.

Should you wish to schedule a meeting or have any questions, please contact Tricia Treece at treecep@adeq.state.ar.us. We request that written comments be submitted electronically by emailing treecep@adeq.state.ar.us. You may also mail comments to Tricia Treece, Office of Air Quality, Division of Environmental Quality, Department of Energy and Environment, 5301 Northshore Drive, North Little Rock, AR 72118.

Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a horizontal line extending to the right.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Melanie Foster, Oklahoma DEQ



ARKANSAS ENERGY & ENVIRONMENT

March 1, 2021

Walker Williamson
Senior Project Manager, Air Quality Division
Texas Commission on Environmental Quality

Sent via electronic mail

Re: Notification of Opportunity for Consultation; Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Mr. Williamson:

This letter serves to notify you that the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) has prepared two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan (SIP) to address requirements for Planning Period II. The first addresses Regional Haze Rule Requirements for Planning Period II with the exception of the control strategy for Entergy's Independence facility. The second addresses the control strategy for Independence.

This notification is intended to provide your agency with an opportunity for a sixty-day consultation period on this SIP revision in accordance with 40 C.F.R. § 51.308(i). This consultation will give you the opportunity to discuss your assessment of the impact of the proposed revisions on federal Class I areas in a manner consistent with 40 C.F.R. § 51.308(i).

The pre-proposal draft of the SIP revision can be accessed at <https://1drv.ms/f/s!AtaMFQw8GYddgWVKkz-quTL2xT6f>. Please note that all documents are draft working documents and are subject to change prior to finalization for proposal. If changes are made between the date of this letter and proposal, DEQ will notify you of the changes.

DEQ requests that any comments on the pre-proposal copy of the SIP revision be provided to DEQ by no later than Friday April 30, 2021.

Should you wish to schedule a meeting or have any questions, please contact Tricia Treece at treecep@adeq.state.ar.us. We request that written comments be submitted electronically by emailing treecep@adeq.state.ar.us. You may also mail comments to Tricia Treece, Office of Air Quality, Division of Environmental Quality, Department of Energy and Environment, 5301 Northshore Drive, North Little Rock, AR 72118.

Sincerely,

A handwritten signature in black ink, appearing to read 'William K. Montgomery', with a stylized flourish at the end.

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Margaret Earnest
Kristin Jacobsen
Stephanie Shirley

Treece, Tricia

From: Medina, Dayana <Medina.Dayana@epa.gov>
Sent: Tuesday, March 2, 2021 8:59 AM
To: Treece, Tricia
Cc: Feldman, Michael; Clark, David; Montgomery, William
Subject: RE: Arkansas Regional Haze Pre-Proposal Draft Documents

Tricia,

Thank you for sharing the pre-proposal documents. We will let you know if we have any feedback.

Best Regards,

Dayana Medina

U.S. Environmental Protection Agency, Region 6
Air & Radiation Division
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102
214-665-7241

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, March 01, 2021 6:16 PM
To: Medina, Dayana <Medina.Dayana@epa.gov>
Cc: Feldman, Michael <Feldman.Michael@epa.gov>; clarkd@adeq.state.ar.us; montgomery <montgomery@adeq.state.ar.us>
Subject: Arkansas Regional Haze Pre-Proposal Draft Documents

Dayana,
We just sent letters to the federal land managers and affected states providing them the opportunity to discuss our pre-proposal draft documents for the Arkansas Regional Haze Planning Period II SIP revision. We would also like to provide these documents to EPA Region 6. Please let us know by April 30, 2021 if you have any feedback that you would like to provide on our pre-proposal documents. These documents are available at:
<https://1drv.ms/f/s!AtaMFQw8GYddgWVKkz-quTLxT6f>.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Allen, Tim <tim_allen@fws.gov>
Sent: Tuesday, March 2, 2021 3:53 PM
To: Treece, Tricia
Subject: Re: [EXTERNAL] RE: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

I have it. Thank you.
Tim

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Tuesday, March 2, 2021 2:49 PM
To: Allen, Tim <tim_allen@fws.gov>
Subject: [EXTERNAL] RE: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Tim,
I am just checking in to make sure you got the email that I sent yesterday.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Treece, Tricia
Sent: Monday, March 1, 2021 5:28 PM
To: tim_allen@fws.gov
Cc: Clark, David; Montgomery, William
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Tim,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director inviting the US. Fish and Wildlife Service to review and provide feedback on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Tuesday, March 2, 2021 7:49 AM
To: Treece, Tricia
Cc: Wilbur, Emily; Clark, David; Montgomery, William
Subject: RE: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Thanks Tricia,

Confirming receipt. I'll let you know if we have any questions or if we want to set up a meeting with your group to discuss.

Thank you,

Mark Leath, P.E.
SIP Unit Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

Promoting, Protecting and Enjoying our Natural Resources. Learn more at www.dnr.mo.gov.

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, March 1, 2021 5:58 PM
To: Leath, Mark <mark.leath@dnr.mo.gov>
Cc: Wilbur, Emily <emily.wilbur@dnr.mo.gov>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Mark,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager

**Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch**

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Treece, Tricia

From: Strait, Randy P <randy.strait@ncdenr.gov>
Sent: Monday, March 1, 2021 6:37 PM
To: Treece, Tricia; Abraczinskas, Michael
Cc: Chad LaFontaine; Clark, David; Montgomery, William
Subject: RE: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Tricia, thank you for the opportunity to review your pre-proposal draft. We will let you know if we have any questions or comments.

Best,
Randy

Randy Strait
Chief, Planning Section
Division of Air Quality
North Carolina Department of Environmental Quality

919 707 8721 office
919 724 8080 mobile
randy.strait@ncdenr.gov

1641 Mail Service Center
217 West Jones Street
Raleigh, NC 27699-1641



*Email correspondence to and from this address is subject to the
North Carolina Public Records Law and may be disclosed to third parties.*

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, March 01, 2021 7:09 PM
To: Abraczinskas, Michael <michael.abraczinskas@ncdenr.gov>
Cc: Strait, Randy P <randy.strait@ncdenr.gov>; Chad LaFontaine <clafontaine@metro4-sesarm.org>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery,

William <Montgomery@adeq.state.ar.us>

Subject: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Mr. Abraczinskas,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager

Division of Environmental Quality | **Office of Air Quality**

Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



Treece, Tricia

From: Walker Williamson <walker.williamson@tceq.texas.gov>
Sent: Tuesday, March 2, 2021 7:35 AM
To: Treece, Tricia
Cc: Stephanie Shirley; Kristin Jacobsen; Clark, David; Montgomery, William
Subject: RE: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Thanks, Tricia. We'll begin reviewing the draft SIPs and I'll reach out to you if we have any comments or would like to discuss.

Walker Williamson
Senior Project Manager, Air Quality Division
Texas Commission on Environmental Quality
(512) 239-3181



How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, March 1, 2021 6:13 PM
To: Walker Williamson <walker.williamson@tceq.texas.gov>
Cc: Stephanie Shirley <Stephanie.Shirley@Tceq.Texas.Gov>; Kristin Jacobsen <Kristin.Jacobsen@tceq.texas.gov>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>
Subject: Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Walker,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | **Office of Air Quality**
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 12, 2021

William K. Montgomery
Associate Director, Office of Air Quality
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, AR 72118

Subject: Consultation Comments; Arkansas Regional Haze State Implementation Plan (SIP)
Revision for the Second Planning Period

Dear William K. Montgomery:

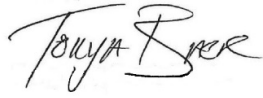
Your letter dated March 1, 2021, notified the Texas Commission on Environmental Quality (TCEQ) of an available draft Regional Haze SIP revision for review under the consultation requirements of 40 Code of Federal Regulations §51.308(i) and requested any comments be provided to Arkansas Division of Environmental Quality (DEQ) no later than April 30, 2021. TCEQ staff has identified two issues for your consideration as you complete your proposal.

- 1) Appendix L: *Estimation of Visibility Benefits of Planning Period II Long-Term Strategy* appears to show that Arkansas DEQ has removed all emissions from American Electric Power's Pirkey and Welsh power plants in Texas as part of its long-term strategy due to the planned retirement of those plants. While the TCEQ acknowledges that the company announced retirement of both plants in November 2020 as part of its plan to comply with the United States Environmental Protection Agency (EPA) Coal Combustion Residuals Rule, the retirements have not been made enforceable through actions by the company to void the operating permits for either plant. The TCEQ did not include emissions reductions from the closure of those plants as part of its October 7, 2020 proposed Regional Haze SIP revision for the second planning period and TCEQ staff does not anticipate recommending their incorporation as an enforceable measure in the adopted SIP revision.
- 2) In the draft SIP revision, Arkansas DEQ selected sources for four-factor analysis based on their percent contribution relative to other sources within the Area of Influence for each Class I area. For this work, the 2016 emissions inventory developed by Ramboll for the Central States Air Resources Agencies Association (CenSARA) was used and was based on the 2011 National Emissions Inventory. Emissions for point sources have changed greatly since 2011, as demonstrated by the emissions inventory trends for sulfur dioxide (SO₂) and nitrogen oxides (NO_x) in Chapter 6: *Emissions Inventory* of the proposed Texas SIP revision. Because emissions of both pollutants have decreased substantially since 2011, a more recent inventory should be used for Regional Haze planning. The TCEQ used 2016 for screening sources for four-factor analysis and as a base year for future year projections. Moreover, the EPA's August 2019 Regional Haze guidance indicates that projections for the end of the second planning period, 2028, should be used for selecting sources for four factor analysis. We recommend that Arkansas DEQ consider updating its analysis based on these recommendations.

Page 2
William K. Montgomery
March 12, 2021

Thank you for the opportunity to review your draft SIP revision. If you have any questions or need additional information, please contact Walker Williamson at 512-239-3181 or by email at walker.williamson@tceq.texas.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tony Baer". The signature is fluid and cursive, with the first name "Tony" and last name "Baer" clearly distinguishable.

Tony Baer
Director, Office of Air
Texas Commission on Environmental Quality

From: [Treece, Tricia](#)
To: [Droke, Erika](#); [Clark, David](#); [Montgomery, William](#)
Subject: FW: Kentucky TVA - Shawnee Draft Four-Factor Analysis
Date: Wednesday, April 7, 2021 10:17:05 AM
Attachments: [2021-02-19 Revised TVA Shawnee 4FA Response.pdf](#)
[image001.png](#)

FYI

Erika,

Please add this email to our consultation log.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Poff, Leslie M (EEC) [<mailto:LeslieM.Poff@ky.gov>]
Sent: Wednesday, April 7, 2021 10:16 AM
Cc: Duff, Melissa K (EEC); Lewis, Kelly (EEC); Bowman, Anna (EEC)
Subject: Kentucky TVA - Shawnee Draft Four-Factor Analysis

Good morning,

Attached is the draft four-factor analysis for TVA-Shawnee. Kentucky's determination for whether new control measures will be required is not included in the document. If you have any comments or questions, please let me know.

Thank you.

Leslie Poff
Kentucky Division for Air Quality
300 Sower Blvd., 2nd Floor
Frankfort, KY 40601
Phone: 502-782-6735

Treece, Tricia

From: Strait, Randy P <randy.strait@ncdenr.gov>
Sent: Monday, April 26, 2021 4:27 PM
To: Treece, Tricia; Abraczinskas, Michael
Cc: Chad LaFontaine; Clark, David; Montgomery, William; Droke, Erika; Manning, Tammy; Bartlett, Joshua W; Tardif, Elliot M; Wylie, Heather K
Subject: RE: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Hello Tricia,

We reviewed Arkansas' draft regional haze SIP and "Control Strategy Evaluation for Entergy Independence" and we do not have any comments.

Thank you for the opportunity to review these items and complete our consultation process.

Best regards,
Randy

Randy Strait
Chief, Planning Section
Division of Air Quality
North Carolina Department of Environmental Quality

919 707 8721 office
919 724 8080 mobile
randy.strait@ncdenr.gov

1641 Mail Service Center
217 West Jones Street
Raleigh, NC 27699-1641



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North Carolina Public Records Law and may be disclosed to third parties.*

Droke, Erika

From: Treece, Tricia
Sent: Monday, April 26, 2021 3:54 PM
To: 'Strait, Randy P'
Cc: Bartlett, Joshua W; Manning, Tammy; Montgomery, William; Clark, David; Droke, Erika
Subject: RE: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Categories: REGIONAL HAZE WORK

It should be flipped. It would take them less time to implement DSI (therefore longer RUL). We don't have a preference for a formal letter. We will include our March 1st letter and this email chain in our Communication and Consultation records. We will fix the error in the narrative.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Strait, Randy P [<mailto:randy.strait@ncdenr.gov>]
Sent: Monday, April 26, 2021 2:16 PM
To: Treece, Tricia
Cc: Bartlett, Joshua W; Manning, Tammy
Subject: RE: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

Hi Tricia,

We reviewed the draft SIP and have the following question/comment: In "Control Strategy Evaluation for Entergy Independence", final paragraph of II.C., it says Entergy assumed 3.42 years for the DSI options and 5.42 years for the other technologies. Those values appear to be flipped, when compared to the spreadsheet.

Otherwise we have no comments. Would you prefer that we send a formal letter acknowledging that we have not comments, or would a rely to your March 1 email be ok? If the question/comment on the Control Strategy Evaluation for Entergy Independence is correct we can leave this out of the letter (or email reply).

Thanks,
Randy

Randy Strait
Chief, Planning Section
Division of Air Quality
North Carolina Department of Environmental Quality

919 707 8721 office
919 724 8080 mobile
randy.strait@ncdenr.gov

1641 Mail Service Center
217 West Jones Street
Raleigh, NC 27699-1641



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North Carolina Public Records Law and may be disclosed to third parties.*

From: Treece, Tricia <treecep@adeq.state.ar.us>
Sent: Monday, March 01, 2021 7:09 PM
To: Abraczinskas, Michael <michael.abraczinskas@ncdenr.gov>
Cc: Strait, Randy P <randy.strait@ncdenr.gov>; Chad LaFontaine <clafontaine@metro4-sesarm.org>; Clark, David <CLARKD@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>
Subject: [External] Consultation on Arkansas Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

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Mr. Abraczinskas,

I hope you are doing well. Please see attached for a letter from our Office of Air Quality Associate Director regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents.

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: [Treece, Tricia](#)
To: [Clark, David](#); [Jobe, Kelly](#); [Droke, Erika](#); [Young, Margaret](#); [Hossan, Iqbal](#)
Subject: FW: Arkansas Regional Haze SIP Planning Period II Consultation Update
Date: Monday, May 3, 2021 7:51:55 AM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[AR RH FS Comment Response Letter 20210429.pdf](#)
[image002.png](#)

FYI Forest Service Comments

Tricia Treece | Policy and Planning Branch Manager
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Mcneel, Pleasant - FS [mailto:pleasant.mcneel@usda.gov]
Sent: Friday, April 30, 2021 1:40 PM
To: Treece, Tricia
Cc: Anderson, Bret -FS; Boley, Margrett -FS; Wood, Lori - FS; Heithecker, Troy -FS; Deal, Jacob - FS
Subject: RE: Arkansas Regional Haze SIP Planning Period II Consultation Update

Ms. Treece,

Attached is the USDA Forest Service comment letter addressing the Arkansas pre-proposal draft Regional Haze Planning Period II State Implementation Plan Revision documents. As I noted during our consultation call on April 27, 2021 between ADEQ and FLM representatives, the USFS review focused on proposed Planning Period II emission controls. Overall, the plan is comprehensive and well organized. We appreciate your hard work, and particularly your efforts at early consultation. As discussed in detail in the attached comment letter, we believe a number of the proposed control strategies are cost-effective and warrant further consideration.

Thank you again for the opportunity to offer USDA Forest Service Comments on the pre-proposal draft Regional Haze Planning Period II SIP.



Pleasant J McNeel IV, PE
Air Quality Specialist
Forest Service
Region 8, National Forests in

Mississippi, Alabama and Florida

p: 404-638-4813

f: 601-965-1779

pmcneel@fs.fed.us

200 South Lamar Street, Suite 500N

Jackson, MS 39201

www.fs.fed.us



Caring for the land and serving people

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Thursday, March 11, 2021 4:16 PM

To: tim_allen@fws.gov; Mcneel, Pleasant - FS <pleasant.mcneel@usda.gov>; Anderson, Bret -FS <bret.a.anderson@usda.gov>; Scott.Copeland <scott.copeland@colostate.edu>; DELONEY, SCOTT <SDELONEY@idem.IN.gov>; rory.davis@illinois.gov; kelly.lewis@ky.gov; Vivian Johnson (DEQ) (Vivian.Johnson2@la.gov) <Vivian.Johnson2@la.gov>; Vennetta Hayes (Vennetta.Hayes@LA.GOV) <Vennetta.Hayes@LA.GOV>; Leath, Mark (mark.leath@dnr.mo.gov) <mark.leath@dnr.mo.gov>; Wilbur, Emily (emily.wilbur@dnr.mo.gov) <emily.wilbur@dnr.mo.gov>; Kirsten King (kirsten_king@nps.gov) <kirsten_king@nps.gov>; Peters, Melanie (melanie_peters@nps.gov) <melanie_peters@nps.gov>; Don Shepherd (don_shepherd@nps.gov) <don_shepherd@nps.gov>; Michael.Abraczinskas@ncdenr.gov; 'randy.strait@ncdenr.gov' <randy.strait@ncdenr.gov>; clafontaine@metro4-sesarm.org; William Garbe (Cooper.Garbe@deq.ok.gov) <Cooper.Garbe@deq.ok.gov>; Melanie.foster@deq.ok.gov; 'walker.williamson@tceq.texas.gov' <walker.williamson@tceq.texas.gov>; Stephanie Shirley (Stephanie.Shirley@Tceq.Texas.Gov) <Stephanie.Shirley@Tceq.Texas.Gov>; kristin.jacobsen@tceq.texas.gov; Medina, Dayana (Medina.Dayana@epa.gov) <Medina.Dayana@epa.gov>; 'feldman.michael@epa.gov' <feldman.michael@epa.gov>

Cc: Clark, David <CLARKD@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Young, Margaret <Margaret.Young@adeq.state.ar.us>

Subject: Arkansas Regional Haze SIP Planning Period II Consultation Update

In our consultation drafts, we refer to a consent decree between Sierra Club and Entergy, which affects facilities evaluated by Arkansas DEQ for Regional Haze Planning Period II. At the time we sent the consultation drafts to you for your review, the consent decree had not yet been entered. The consent decree was entered today by Judge Kristine Baker. A copy of the consent decree can be accessed here: <https://237995-729345-1-raikfcquaxqncofqfm.stackpathdns.com/wp-content/uploads/2021/03/settle.pdf>

Tricia Treece | Policy and Planning Branch Manager

Division of Environmental Quality | Office of Air Quality

Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

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ARKANSAS
ENERGY & ENVIRONMENT

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File Code: 2500
Date:

Ms. Tricia Treece
Office of Air Quality, Division of Environmental Quality
5301 Northshore Drive,
North Little Rock, AR 72118

RE: Arkansas Regional Haze State Implementation Plan (SIP) for Planning Period II

Dear Ms. Treece:

On March 1, 2021, the Arkansas Office of Air Quality, Division of Environmental Quality (ADEQ) 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 Pleasant McNeel, at 404-638-4813 or via email at pleasant.mcneel@usda.gov or Bret Anderson (bret.a.anderson@usda.gov).

Again, we appreciate the opportunity to work closely with the Arkansas Office of Air Quality, Division of Environmental Quality.

Sincerely,

LORI WOOD
Forest Supervisor
Ozark-St. Francis National Forests



TROY D. HEITHECKER
Forest Supervisor
Ouachita National Forest

Enclosure

cc: Margrett Boley
Sherri K. Schwenke
Melanie Pitrolo

Enclosure***USDA Forest Service Technical Comments on Arkansas Office of Air Quality, Division of Environmental Quality (ADEQ) 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 DRAFT plan. Below are items that are of concern to the USDA Forest Service.

Overall, the plan is comprehensive and well organized. It is easy to follow and generally well explained. We recognize the significant emission reductions of nitrogen oxides (NO_x) and sulfur dioxide (SO₂) made in Arkansas since 2005 due to economic and regulatory drivers. It is clear that a great deal of detailed technical work went into the DRAFT plan, and we have found supporting data to be thorough.

We specifically appreciate:

- the effort ADEQ made to follow the EPA Pollution Control Cost Manual, particularly with respect to the remaining useful life of sources being considered for emissions controls and application of the current 3.25% prime interest rate,
- not relying on visibility as a 5th factor for determining the cost-effectiveness of emissions controls, and
- the willingness of Arkansas to engage the USDA Forest Service early in the drafting of the RH SIP, which is commendable and a model for other states.

Average vs. Maximum Monthly Emissions:

During the consultation call on April 27, 2021 between ADEQ and FLM representatives it was discussed whether maximum monthly emission rates would be more appropriate for estimating cost-effectiveness (cost per ton controlled), given that visibility impacts result from short-term emissions. Maximum monthly emission rates would result in larger estimated reductions, and a lower cost per ton controlled. ADEQ noted that maximum monthly emissions were considered primarily for sizing equipment and determining implementation costs of emissions controls undergoing 4-Factor analysis.

The difference between maximum and average monthly emissions provided in the draft RH SIP range from 33% higher for the FutureFuel sources to over 200% for the Domtar No. 3 Power Boiler. While we understand that average monthly emissions may be used to estimate cost-effectiveness for consistency, we would request that the ADEQ add a discussion of the seasonality of the maximum monthly emission rate, and whether there is any correlation to the twenty percent most impaired days.

Control Technology Determinations by Emission Unit Type:

Table 35 - *Descriptive Statistics for Cost/Ton Values of Planning Period I Source-Specific Control Technology Determinations by Emission Unit Type*, provides summary statistics for

Planning Period II cost/ton by emission unit type. This cost-effectiveness threshold methodology is focused on establishing reasonable costs of control determinations for BART and reasonable progress for Planning Period I, and arguably is a useful metric for screening a wide range of emission control strategies with widely ranging costs. However, the applicability to the current analysis of cost-effectiveness is less clear. Costs not considered unreasonable in the past do not support a threshold for what is reasonable in the present. Given that incremental progress towards achieving 2064 goals will be increasingly challenging as the program progresses, Table 35 cost-effectiveness thresholds are arguably more appropriate as a floor than a ceiling.

The spreadsheet of compiled Planning Period I cost/ton (included in Appendix J) from which Table 35 is derived, does not appear to differentiate between the cost of controls for SO₂ and NO_x. This makes Table 35 cost-effectiveness thresholds less relevant for emission control strategies evaluated for SO₂ or NO_x, but not both. Finally, when looking at the actual data through the lens of individual emission control strategies, as discussed in more detail below, it becomes clear that case-by-case evaluation of similar facilities implementing similar emission control strategies is more appropriate.

Proposed Controls in Current Draft Arkansas Regional Haze SIP:

Domtar Ashdown Mill

The Domtar Ashdown Mill No. 2 Power Boiler (SN-05) has a design heat input rate of 820-MMBtu/hr and is capable of burning a variety of fuels including clean cellulosic biomass, coal, tire derived fuel, natural gas, wood chips used to absorb oil, and petroleum coke. The draft RH SIP identified the emission control strategy of increased reagent usage at existing scrubbers for the No. 2 Power Boiler as having a cost-effectiveness of \$3,590/ton.

Table 35 in the DRAFT SIP provides summary statistics for Planning Period II cost/ton by emission unit type. The 98th percentile cost/ton value for Industrial Boilers is \$3,328/ton. The reference for Table 35 is a spreadsheet of compiled Planning Period I cost/ton data (Appendix J). Appendix J includes additional analysis for three capacity ranges of Industrial Boilers (<100 MMBtu/hr; 100-250 MMBtu/hr; and >250 MMBtu/hr), which indicate that compiled Planning Period I cost/ton increase with larger capacity boilers (\$751, \$1,826 and \$3,436/ton, respectively).

The largest industrial boiler in the Appendix J spreadsheet is 800 MMBtu/hr. The Cost-effectiveness for this unit is listed as \$3,732.41/ton. That unit is also a Power Boiler at a Kraft pulp and paper mill facility, GP Brunswick Cellulose in Georgia.

We believe the proposed control strategy for the Domtar Ashdown Mill No. 2 Power Boiler (SN-05), increased reagent usage at existing scrubbers, is a cost-effective emissions reduction strategy. At a minimum additional cost effectiveness analysis should focus on similar emission control strategies at similar facilities, rather than relying on summary statistics based upon broad source categories.

Flint Creek

The Flint Creek Power Plant is a coal-fired electric generating station located in Benton County, Arkansas. Flint Creek has one 558-megawatt dry bottom wall-fired boiler. The boiler burns low

sulfur western coal as a primary fuel, but it can also combust fuel oil and tire-derived fuels. The draft RH SIP identified the preferred emission control strategy for the 558-megawatt boiler as selective catalytic reduction (SCR) having a cost-effectiveness of \$5,771/ton.

The 98th percentile cost/ton value for EGU Boilers is \$5,086/ton (Table 35). Unlike the Industrial Boilers source category, discussed above, the spreadsheet of compiled Planning Period I cost/ton data does not indicate any obvious trend in cost/ton values with capacity. The 98th percentile cost/ton value for EGU Boilers with a capacity >500 MW is \$5,138/ton.

We believe the proposed control strategy for the Flint Creek 558-megawatt boiler, selective catalytic reduction (SCR), is a cost-effective emissions reduction strategy. At a minimum additional cost effectiveness analysis should focus on similar facilities implementing comparable emissions controls, rather than relying on summary statistics based upon broad source categories.

FutureFuel

Ninety-nine percent of the facility's SO₂ emissions and seventy-two percent of the facility's NO_x emissions come from three coal-fired boilers used to produce steam and destroy chemical waste. The three coal-fired boilers are balanced draft steam generation boilers designed to operate at 70-MMBtu/hr per unit.

All three technically feasible low sulfur coal strategies were cost-effective when compared to the ADEQ DRAFT SIP Industrial Boiler threshold (Table 35). The most cost-effective strategy is switching from three percent sulfur content coal to two percent sulfur content coal. The ADEQ determined that the incremental cost-effectiveness between two percent sulfur coal and one and a half percent sulfur coal is above DEQ's threshold for Industrial Boilers. However, given that all three technically feasible low sulfur coal strategies were cost-effective when compared to the ADEQ threshold, we would strongly encourage implementation of the one and a half percent sulfur coal emission reduction strategy.

Treece, Tricia

From: Mcneel, Pleasant - FS <pleasant.mcneel@usda.gov>
Sent: Friday, April 30, 2021 1:54 PM
To: Treece, Tricia
Subject: RE: Arkansas Regional Haze SIP Planning Period II Consultation Update
Attachments: Pages from 1_PP2 SIP Narrative Main Proposal_3_1_2021_pjm.pdf

PS: Attached are the typos I caught in the document. I wasn't reading as an editor, obviously, but these were small typos which confused me initially.

Thanks again for all your hard work! I know how difficult producing a document of this magnitude can be!



Pleasant J McNeel IV, PE
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Caring for the land and serving people

From: Mcneel, Pleasant - FS
Sent: Friday, April 30, 2021 1:40 PM
To: Treece, Tricia <treecep@adeq.state.ar.us>
Cc: Anderson, Bret -FS <bret.a.anderson@usda.gov>; Boley, Margrett -FS <margrett.boleyn@usda.gov>; Wood, Lori - FS <Lori.Wood@usda.gov>; Heithecker, Troy -FS <troy.d.heithecker@usda.gov>; Deal, Jacob - FS <jacob.deal@usda.gov>
Subject: RE: Arkansas Regional Haze SIP Planning Period II Consultation Update

Ms. Treece,

Attached is the USDA Forest Service comment letter addressing the Arkansas pre-proposal draft Regional Haze Planning Period II State Implementation Plan Revision documents. As I noted during our consultation call on April 27, 2021 between ADEQ and FLM representatives, the USFS review focused on proposed Planning Period II emission controls. Overall, the plan is comprehensive and well organized. We appreciate your hard work, and particularly your efforts at early consultation. As discussed in detail in the attached comment letter, we believe a number of the proposed control strategies are cost-effective and warrant further consideration.

Thank you again for the opportunity to offer USDA Forest Service Comments on the pre-proposal draft Regional Haze Planning Period II SIP.



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Air Quality Specialist

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Caring for the land and serving people

From: Treece, Tricia <treecep@adeq.state.ar.us>

Sent: Thursday, March 11, 2021 4:16 PM

To: tim_allen@fws.gov; Mcneel, Pleasant - FS <pleasant.mcneel@usda.gov>; Anderson, Bret -FS <bret.a.anderson@usda.gov>; Scott.Copeland <scott.copeland@colostate.edu>; DELONEY, SCOTT <SDELONEY@idem.IN.gov>; rory.davis@illinois.gov; kelly.lewis@ky.gov; Vivian Johnson (DEQ) <Vivian.Johnson2@la.gov> <Vivian.Johnson2@la.gov>; Vennetta Hayes <Vennetta.Hayes@LA.GOV> <Vennetta.Hayes@LA.GOV>; Leath, Mark <mark.leath@dnr.mo.gov> <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov> <emily.wilbur@dnr.mo.gov>; Kirsten King <kirsten_king@nps.gov> <kirsten_king@nps.gov>; Peters, Melanie <melanie_peters@nps.gov> <melanie_peters@nps.gov>; Don Shepherd <don_shepherd@nps.gov> <don_shepherd@nps.gov>; Michael.Abraczinskas@ncdenr.gov; 'randy.strait@ncdenr.gov' <randy.strait@ncdenr.gov>; clafontaine@metro4-sesarm.org; William Garbe <Cooper.Garbe@deg.ok.gov> <Cooper.Garbe@deg.ok.gov>; Melanie.foster@deg.ok.gov; 'walker.williamson@tceq.texas.gov' <walker.williamson@tceq.texas.gov>; Stephanie Shirley <Stephanie.Shirley@Tceq.Texas.Gov> <Stephanie.Shirley@Tceq.Texas.Gov>; kristin.jacobsen@tceq.texas.gov; Medina, Dayana <Medina.Dayana@epa.gov> <Medina.Dayana@epa.gov>; 'feldman.michael@epa.gov' <feldman.michael@epa.gov>

Cc: Clark, David <CLARKD@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>; Montgomery, William <Montgomery@adeq.state.ar.us>; Jobe, Kelly <JOBE@adeq.state.ar.us>; Young, Margaret <Margaret.Young@adeq.state.ar.us>

Subject: Arkansas Regional Haze SIP Planning Period II Consultation Update

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This is an OAQ draft working document. All information contained herein is subject to change and may differ substantially from the final document. The information contained in this document should not be considered the position or views of the Department or the Governor.

			0.5% or less by weight	sulfur content greater than 0.5% after August 8, 2018
White Bluff Power Plant (AFIN 35-00110)	SN-01 Unit 1 Boiler	NOx	Participation in CSAPR Ozone Season NOx Trading Program	Implementation of CSAPR began in 2015. The emission budget stringency for Arkansas increased for 2017 and again for 2018 and beyond.
		SO ₂	0.60 lb/MMBtu based on fuel switching to low sulfur coal	Compliance required by August 8, 2021
		PM	714 lb/hr based on permitted emission limit as of October 15, 2007	Entergy has been required to comply with this emission limit as a permit condition since April 28, 2005
	SN-02 Unit 2 Boiler	NOx	Participation in CSAPR Ozone Season NOx Trading Program	Implementation of CSAPR began in 2015. The emission budget stringency for Arkansas increased for 2017 and again for 2018 and beyond.
		SO ₂	0.60 lb/MMBtu based on fuel switching to low sulfur coal	Compliance required by August 8, 2021
		PM	714 lb/hr based on permitted emission limit as of October 15, 2007	Entergy has been required to comply with this emission limit as a permit condition since April 28, 2005
	SN-05 Auxiliary Boiler	NOx	105.2 lb/hour SO ₂	Per the Planning Period I SIP, compliance was required as of August 8, 2018; however, Entergy has been required to comply with this emission limit based on permit conditions since August 9, 2012
		SO ₂	32.2 lb/hour NOx	Per the Planning Period I SIP, compliance was required as of August 8, 2018; however, Entergy has been required to

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4. Domtar Ashdown Mill

The Ashdown Mill is a pulp and paper mill owned by Domtar A.W. LLC located in Little River County, Arkansas. Ashdown Mill has four emission units that emit over 100 tpy of NOx: No. 2 Power Boiler (SN-05), No. 3 Power Boiler (SN-01), No. 2 Recovery Boiler (SN-06), and No. 3 Recovery Boiler (SN-14). Two of those units also emit over 100 tpy of SO₂: No. 2 Power Boiler (SN-05) and No. 3 Power Boiler (SN-01). Combined, these four emission units emit the majority of SO₂ and NOx from Ashdown Mill.

No. 2 Power Boiler has a design heat input rate of 820 MMBtu/hr and is capable of burning a variety of fuels including clean cellulosic biomass, coal, tire derived fuel, natural gas, wood chips used to absorb oil, and petroleum coke. The unit is equipped with two Venturi scrubbers for removal of particulates and SO₂. No. 2 Power Boiler was subject to BART for Regional Haze Planning Period I. Based on the BART analyses for this unit, EPA established a BART limit of 91.5 lb SO₂/hr ~~345~~^{207.4} lb NOx/hr for this unit. The SO₂ BART limit was based on utilization of additional reagent in the existing Venturi scrubbers installed for No. 2 Power Boiler. The NOx BART limit was based on no new controls for NOx. In 2019, DEQ finalized an alternative to BART for this unit and No. 1 Power Boiler based on changes in operations at Ashdown Mill. This alternative to BART achieved greater visibility progress than the 2016 FIP BART limits.

No. 3 Power Boiler was a recovery boiler converted to a power boiler in 1990-91. It has a design heat input rate of 790 MMBtu/hr and is capable of burning a variety of fuels including clean cellulosic biomass, bark and wood chips used to absorb oil spills, wood waste, tire derived fuel, and natural gas. No. 3 Power Boiler has no existing combustion or post-combustion controls for NOx or SO₂.

No. 2 Recovery Boiler has a heat input capacity of 1,160 MMBtu/hr and combusts black liquor solids to recover inorganic chemicals and natural gas. No. 2 Recovery Boiler has existing no combustion or post-combustion controls for NOx or SO₂.

No. 3 Recovery Boiler has a heat input capacity of 1,088 MMBtu/hr and combusts black liquor solids to recover inorganic chemicals and natural gas. No. 3 Recovery Boiler has existing no combustion or post-combustion controls for NOx or SO₂ listed in the permit for Ashdown Mill.

On January 8, 2020, DEQ sent an information collection request to Domtar, asking for information about potential emission reduction strategies for these emission units at Ashdown Mill. Specifically, DEQ requested information about the technical feasibility and cost of the following SO₂ and NOx emission reduction strategies:

- SO₂ (ranked from highest control efficiency to lowest)²⁰⁰

²⁰⁰ EPA Menu of Control Measures

This is an OAQ draft working document. All information contained herein is subject to change and may differ substantially from the final document. The information contained in this document should not be considered the position or views of the Department or the Governor.

Dry FGD low	SO ₂	3,110,337
Dry FGD high	SO ₂	45,980,612
SNCR (Scenario 1)	NO _x	314,019
SNCR (Scenario 2)	NO _x	985,072

Table 29: Estimated Cost-Effectiveness of Emission Reduction Strategies Evaluated for Ashdown Mill No. 3 Power Boiler in 2019 Dollars

Control Strategy	Pollutant	Cost-effectiveness (\$/year/ton)
Wet FGD low	SO ₂	60,459
Wet FGD high	SO ₂	276,227
Dry FGD low	SO ₂	73,705
Dry FGD high	SO ₂	1,089,588
SNCR (Scenario 1)	NO _x	38,659
SNCR (Scenario 2)	NO _x	12,348

iv. Time Necessary for Compliance

Table 30 summarizes the time Domtar estimates would be necessary to comply with an emission limit based on the assessed technologies for No. 3 Power Boiler.

Table 30: Time Necessary to Comply for Evaluated Control Strategies for Ashdown Mill No. 2 Power Boiler

Control Technology	Time Necessary to Comply	Basis
Wet FGD	5 years	Determinations for utilities in other SIPs for Planning Period I
SDA	5 years	Determinations for utilities in other SIPs for Planning Period I
SNCR	5 years	Precedent in Utah and North Dakota FIPs

v. Energy and Non-Air Quality Impacts

Domtar reported that installation of a WGS or SDA system for No. 3 Power Boiler would have an energy impact, increase water usage, and increase wastewater generation. These impacts have been factored into the cost of compliance for these technologies.

Domtar does not expect that energy impacts or non-air quality environmental impacts for SNCR would be greater for No. 3 Power Boiler than at any other industrial facility under the SNCR

Droke, Erika

From: Feldman, Michael <Feldman.Michael@epa.gov>
Sent: Monday, May 3, 2021 1:58 PM
To: Treece, Tricia; Montgomery, William; Clark, David; Droke, Erika
Cc: Medina, Dayana; Gallegos, Jacob; Donaldson, Guy
Subject: Draft Comments on Draft AR RH SIP for PP2_HQ comments v2
Attachments: Draft Comments on Draft AR RH SIP for PP2_HQ comments v2.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Please find attached our comments on your draft RH SIP for the second planning period for your consideration.

Please let us know if you have any questions.

Thank you,

Michael Feldman

EPA Comments
Draft Arkansas RH SIP for Second Planning Period

Pollutants and Source Categories Evaluated

1. The SIP narrative does not provide adequate discussion or justification for ADEQ's decision to focus on evaluating controls for SO₂ and NO_x emission sources other than stating that ADEQ believes that IMPROVE monitoring data for Caney Creek and Upper Buffalo indicate that controlling anthropogenic sources of ammonium sulfate and ammonium nitrate would be the most effective strategy for reducing visibility impairment at the two Class I areas. Additional discussion is needed to support the decision to focus on evaluating controls for SO₂ and NO_x, and not considering reductions in PM, VOCs, or ammonia (NH₃). This is especially important given that as SO₂ and NO_x emissions have decreased as a result of controls in the first planning period and other on the books controls, it is reasonable to expect that other visibility impairing pollutants will increasingly be responsible for a higher percentage of the total anthropogenic visibility impairment compared to the first planning period.
2. The SIP narrative at page 14 makes reference to Figure 5 and states that in 2019, the largest contributor to light extinction at Caney Creek on the most impaired days was ammonium sulfate followed by ammonium nitrate, and organic mass was the third largest contributor to light extinction. However, Figure 5 appears to show that organic mass was actually the second largest contributor to light extinction at Caney Creek (even larger than ammonium nitrate) on the most impaired days in 2019. Please confirm whether this is correct. ADEQ should take a close look at anthropogenic sources of organic mass emissions in Arkansas. Based on EPA's Updated 2028 Visibility Air Quality Modeling, which provides projected 2028 visibility conditions and source sector contribution information, a very large percentage of the primary organic carbon and elemental carbon in Arkansas appears to be from burning. Therefore, we recommend that the SIP narrative explain in detail how the state currently limits primary PM from prescribed burning activities. ADEQ may want to consider whether it is necessary to supplement the voluntary Arkansas Smoke Management Plan by developing new regulations for prescribed burning.
3. The SIP narrative does not appear to provide any justification for ADEQ's decision to evaluate controls only for point sources in the second planning period. Statewide anthropogenic emissions of NO_x, SO₂, ammonia, and VOCs in the "nonpoint" source category have increased in 2017 from 2011 levels. Emissions in some of the other source categories have increased in 2017 as well. Table 8 on page 113 of the SIP narrative shows that anthropogenic NO_x emissions in Arkansas in the marine, residential wood, prescribed fire, and nonpoint source categories have increased in 2017 from 2011 levels. Table 9 on pages 114-115 shows that anthropogenic SO₂ emissions in Arkansas in the residential wood, prescribed fire, and nonpoint source categories have increased in 2017 from 2011 levels. Table 11 on page 118 shows that anthropogenic ammonia emissions in Arkansas in the

agricultural fire, oil and gas, residential wood, and nonpoint source categories (along with the point source category) have increased in 2017 from 2011 levels. Table 12 on page 119 shows that anthropogenic VOC emissions in Arkansas in the marine, anthropogenic dust, and nonpoint categories have increased in 2017 from 2011 levels. The Regional Haze Rule requires states to consider evaluating major and minor stationary sources, mobile sources, and area sources in developing the long-term strategy. 40 CFR 51.308(f)(2)(i). Therefore, ADEQ should explain what is causing the increase in visibility impairing emissions in these source categories (and whether the increases are due to changes in inventory methods or are real-world increases) and discuss whether it would be feasible to control emissions in the mobile and area source categories. If ADEQ decides not to consider controls for other source categories, ADEQ must provide a reasonable justification as to how that fulfills its reasonable progress requirements.

4. In the tables showing the “baseline” and “current” visibility conditions (e.g Tables 1, 3, 7), please put the date ranges in the table headings instead of footnotes. This would make it easier to figure out the years of data being used.
5. Data shows that emissions from Arkansas affect some out-of-state Class I areas and detailed information is presented for Mingo, Hercules Glades, Isle Royale, Badlands, Mammoth Cave, Sipsey, and Wichita Mountains. But the SIP narrative is not entirely clear if the state believes that emissions from Arkansas are reasonably anticipated to contribute to visibility impairment in all of those areas or only some of them. Additionally, please explain if there is a particular threshold chosen by ADEQ to identify those Class I areas that emissions from Arkansas contribute to.
6. The SIP narrative at pages 18-19 discusses EPA’s modeling of projected 2028 visibility conditions and source sector contribution information. On page 19, it is noted that “... for the projected 2028 year at Caney Creek, the model may over predict visibility impairment from organic mass and under predict visibility impairment from ammonium nitrate, ammonium sulfate, and coarse mass. The same is noted on page 31 for Upper Buffalo. Please explain how this under-prediction of nitrate and sulfate contributions factors into the state’s analysis.

Reasonable Progress Analysis

7. ADEQ indicates that it used a threshold of seventy percent of cumulative percentage of 2016 AOI Impacts for NO_x and SO₂ combined to determine which sources to bring forward for four-factor analysis. ADEQ should provide additional explanation as to how this threshold was selected and how it appropriately brings forth the necessary sources to examine for four factor analysis. Even if this information is included in an appendix, a short explanation in the SIP narrative would be helpful. We also recommend that Arkansas assess and provide a discussion on whether any additional in-state sources should be selected for a four-factor analysis based on the largest contributions to visibility impairment on Class I areas from Arkansas sources, regardless of the out-of-state impacts.

8. On page 124, ADEQ provides a screening analysis in support of the state's decision not to select Weyerhaeuser NR Company – Dierks Mill nor Albemarle Corporation – South Plant for four factor analyses; The analysis would fall within ADEQ's 70% threshold should ADEQ agree with EPA's previous suggestions to adjust the emissions for recently controlled or shut down sources in Oklahoma and Texas in the source selection analysis. ADEQ states that post-combustion SO₂ controls for the tail gas incinerator at the Albemarle Plant is not a demonstrated technology for this type of emission unit. Please explain if any other SO₂ controls are technically feasible or were considered for this source. Additionally, ADEQ should explain how the decision not to select this source for evaluation impacts Arkansas' reasonable progress requirements.

9. ADEQ's four-factor analyses and the conclusions of each are in different sections. We suggest that ADEQ consider moving the conclusions that begin on page 150 to coincide with each of their respective four-factor analyses or at a minimum refer to the section in the SIP narrative where the conclusions are located. Additionally, these conclusions must explain how ADEQ weighed the four factors in arriving at their conclusions and how the controls selected, if any, relate to reasonable progress.¹ Further, for any evaluated sources where no add-on controls are selected, ADEQ should continue their analysis by clearly identifying existing emission limits and indicating whether that determination of no additional controls means existing measures at those sources are therefore necessary for reasonable progress. If existing measures are necessary for reasonable progress, emission limits corresponding to those existing measures must be either in the SIP or otherwise be federally enforceable and permanent.

10. Section VI.J of the SIP narrative at page 168 states that "The 2028 RPGs are below the 2028 points on the glidepath formed by the URP. Furthermore, the 2028 projected impairment from the VISTAS modeling on the clearest days is below the 2000–2004 baseline for both Arkansas Class I areas even before consideration of the visibility benefits associated with DEQ's long-term strategy. Therefore, DEQ concludes that no further evaluation of additional particulate matter species, lower emitting sources, or other cost-threshold is necessary for Planning Period II." We remind ADEQ that being below the glidepath is not a safe harbor or sufficient justification for any cost threshold selected, or sufficient justification for not evaluating other pollutants or sources in the four factor analysis. As discussed in EPA guidance, consideration that a Class I area is below the glidepath could serve to demonstrate that, after a state has gone through its source selection and control measure analysis, it has no "robust demonstration" obligation per 40 CFR 51.308(f)(3)(ii)(A) and/or (B). See Guidance on Regional Haze State Implementation Plans for the Second Implementation Period at 22.

¹ Arkansas must explain the conclusions it reaches and provide appropriate supporting documentation. See 40 CFR 51.308(f) ("the States must submit ... supporting documentation"), (f)(2)(iii) ("The State must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects.")

White Bluff Power Plant

11. The draft SIP narrative explains that ADEQ considers the enforceable requirement to cease coal-fired operations at White Bluff by December 31, 2028 to be sufficient reason not to perform a four-factor analysis for this source in the second planning period. To help strengthen the SIP, ADEQ should consider evaluating SO₂ controls taking into account a shortened remaining useful life. For example, dry sorbent injection (DSI) typically has low capital costs compared to scrubber controls and may be cost-effective even when factoring in a shortened remaining useful life. Another control option ADEQ may want to consider is whether an SO₂ emission limit more stringent than what was required in the first planning period would be feasible when switching to low sulfur coal.
12. While the cessation of coal combustion at White Bluff is expected to reduce SO₂ emissions to negligible levels, that may not necessarily be the case for NO_x emissions. To help strengthen the SIP, ADEQ should consider providing four-factor analysis of NO_x controls. At a minimum, we recommend that the SIP narrative include a discussion of the existing NO_x controls and NO_x BART requirements from the first planning period for White Bluff, and explain why additional NO_x controls for the White Bluff units are unlikely to be reasonable for the second planning period. See Guidance on Regional Haze State Implementation Plans for the Second Implementation Period at 22-25 (discussing effective controls).

Independence Power Plant

13. The SIP narrative on page 125 states that “DEQ’s evaluation of control strategies for Independence is included in a separate proposal.” Please explain if this means ADEQ will have two separate proposed SIP revisions for the second planning period, or whether ADEQ’s intent is to merge the two drafts into one SIP revision when issuing the proposal.
14. On page 15 of the Independence Control Strategy Evaluation, ADEQ should provide additional discussion on how the application of the selected cost-effective threshold is reasonable as it relates to the Independence facility, especially considering no add-on controls were selected. We provide additional comments related to ADEQ’s selection of the cost-effective threshold elsewhere in this document.
15. If Arkansas is relying on existing emissions measures to demonstrate reasonable progress, then existing limits must be clearly identified, and if necessary, for reasonable progress, they would need to be made federally enforceable and permanent.
16. We remind ADEQ that EPA’s guidance on regional haze SIP development for the second planning period explains that “In the situation of an enforceable requirement for the source to cease operation before the end of the useful life of the controls under consideration, a state may use the enforceable shutdown date as the end of the remaining useful life. To the extent

such a requirement is being relied upon for a reasonable progress determination, the measure would need to be included in the SIP and/or be federally enforceable. See 40 CFR 51.308(f)(2).” *See* “Guidance on Regional Haze State Implementation Plans for the Second Implementation Period” at 34. Now that the settlement agreement between Sierra Club and Entergy to cease coal combustion at the Independence facility by 2030 has been entered by the Court, please inform EPA whether the requirement to cease coal combustion is necessary for reasonable progress and therefore will be included as an enforceable commitment that is submitted as part of the regional haze SIP for the second planning period. Since ADEQ assumes a shortened remaining useful life in the four factor analysis for the Independence facility, EPA believes the most legally defensible option would be to include the enforceable commitment to cease coal combustion as part of the SIP to make it federally enforceable and permanent. EPA is reviewing the settlement agreement and can have additional discussions on this matter with ADEQ in the near future.

17. ADEQ’s cost analysis for NO_x controls for the Independence facility assumes a shortened remaining useful life consistent with the entered settlement agreement between Sierra Club and Entergy to cease coal combustion at the Independence facility by December 31, 2030. While the cessation of coal combustion at the Independence units is expected to reduce SO₂ emissions to negligible levels, that may not necessarily be the case for NO_x emissions unless the units actually shut down. ADEQ should explain why it is appropriate to assume a shortened remaining useful life in the evaluation of NO_x controls for the Independence units.
18. On Page 17 of the Independence Control Strategy Evaluation, under the section “Long Term Strategy for Planning Period II,” ADEQ determines that “No changes to the long-term strategy proposed in ‘Regional Haze Planning Period II: Progress Assessment and Visibility Improvement Strategy’ are necessary based on the control strategy determination for Independence included in this SIP proposal.” We remind ADEQ that there are multiple requirements that must be addressed under 51.308(f)(2) to fulfill the long-term strategy requirements that lay outside the four-factor analysis. If these sections are addressed elsewhere in the main SIP narrative, ADEQ should indicate that and refer to that in the separate SIP narrative for the Independence facility. Conversely, if this section is mislabeled, and merely serves as a conclusion to the four-factor analysis, it should be amended to reflect as such.

FutureFuel Chemical Company

19. Table 17 on page 127 of the draft SIP narrative lists the control options evaluated for the FutureFuel boilers. To avoid any confusion or ambiguity, we recommend that the sub-options under the “Fuel Switching from Coal to Natural Gas Strategies” option include a footnote with a short explanation specifying what replacement vs. retrofit of the boilers would entail.
20. Page 128 of the draft SIP narrative states that “FutureFuel explains that low NO_x burner systems are not available and have not been adequately demonstrated for stoker boiler systems similar to the three coal-fired boilers operated at FutureFuel. Therefore, low NO_x

burners are technically infeasible.” Please provide further explanation regarding this statement, including what type of review was conducted to attempt to identify any existing low NOx burner controls on similar boiler types.

21. Page 129 of the draft SIP narrative states that switching to coal from a nearby power plant (0.05% sulfur content), switching to coals from the Powder River Basin (0.8 lb SO₂/MMBTU, 8,800 Btu/lb), and switching to coals from the Uinta Basin (0.8 lb SO₂/MMBTU, 11,700 Btu/lb) are considered technically infeasible and includes a footnote citing to a July 23, 2020 email from FutureFuel. Please indicate in the footnote that this email is located in Appendix G and consider adding a short explanation in the SIP narrative on the reason why these options are technically infeasible.
22. ADEQ indicates on page 126 that there are no existing controls for either NO_x or SO₂. Especially considering that the FutureFuel boilers have no existing controls, if the final regional haze SIP submitted to EPA were to not include any add-on controls for these boilers, the State must justify how a determination of no add-on controls on FutureFuel’s coal-fired boilers fulfills both its reasonable progress and long-term strategy requirements. ADEQ must provide a discussion supporting the control decisions made, including an explanation of how the four factors were weighed in arriving at the state’s conclusions regarding fuel switching and potential add-on controls. As discussed earlier, ADEQ must explicitly explain how the four factors were weighed in arriving at their conclusions.
23. The long-term strategy includes the selection of 2% sulfur coal (and an associated 3.9 lb/MMBtu SO₂ limit) as reasonable progress for FutureFuel. In addition to the cost/ton value of 2% coal (\$2,171/ton), the estimated cost effectiveness for 1.5% coal (\$2,774/ton) was also below the chosen threshold, and SDA was slightly above the threshold (see more detailed comments on the cost threshold below). Further explanation is needed why more stringent controls were not selected as measures that are necessary for reasonable progress at FutureFuel.
24. FutureFuel’s four factor analysis in Appendix G states that DSI systems have been used in various coal combustion units and have proven to be a fairly effective method of controlling SO₂ in pulverized coal boilers but since FutureFuel’s coal-fired boilers are spreader-stoker boilers, this limits the removal efficiency of DSI. The evaluation of DSI assumes a 40% control efficiency for the FutureFuel boilers. Please provide additional explanation on how this control efficiency estimate was derived.

The Administrative Order for FutureFuel would require the source to sample and analyze all fuel and waste for use in the three coal-fired boilers to determine the sulfur content and heat content of fuel by weight for compliance demonstration purposes. The recordkeeping, testing, and monitoring requirements at paragraphs 3 and 4 of the Administrative Order are not very specific or detailed. The Administrative Order should be revised with the goal of more clearly defining these requirements. At a minimum, the Administrative Order and any

additional orders developed for other sources should cite to the state requirements for recordkeeping, testing, and monitoring that are approved in the Arkansas SIP or provide parallel citations to the CFR requirements.

Domtar Ashdown Mill

25. Section V.B.4 of the draft SIP narrative (page 137 – 138) explains that “Domtar’s response to DEQ’s ICR indicated that no emissions reductions are possible from upgrades to the existing scrubbers [for No. 2 Power Boiler]. Therefore, no further evaluation of the existing scrubber upgrades strategy is included in this analysis.” The Regional Haze Rule requires that in establishing its long-term strategy, a state must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. 40 CFR 51.308(f)(2)(iii). Therefore, ADEQ must include documentation to support this assessment. A copy of the actual report/vendor quote addressing this issue does not appear to be included in Appendix H. Additionally, if neither of the remaining two SO₂ control options (i.e., (1) new downstream scrubber and (2) increased reagent usage at existing scrubbers) are selected for No. 2 Power Boiler based on the weighing of the four factors, ADEQ should obtain additional information from Domtar as to whether there are any additional steps the company could take to be able to quantify the anticipated SO₂ emissions reductions from upgrades to the existing scrubbers. In particular, Domtar appears to base their claim that the SO₂ emission reductions anticipated to result from scrubber upgrades is unquantifiable on a report or vendor quote from 2014, which may now be outdated. ADEQ should consider whether a more recent engineering study is needed determine if upgrades to the existing scrubber are technically feasible and would result in SO₂ emissions reductions.
26. Page 138 of the draft SIP narrative explains that Domtar has asserted that a control efficiency assumption of 27.5% for SNCR for No. 2 Power Boiler (as was assumed in a previous analysis of NO_x controls provided by Domtar to EPA for use in the development of the Arkansas FIP) “is unrealistic given the operating characteristics of No. 2 Power Boiler and could result in stack emissions of 1,700 tons or more per year of unreacted urea.” The SIP narrative cites to an email from Domtar dated July 24, 2020 (please indicate in the SIP narrative that this email can be found in Appendix H). Based on this, the four factor analysis for NO_x for No. 2 Power Boiler assumes a control efficiency of 3%. Please make clear that although ADEQ presents a summary of Domtar’s four factor analysis for SNCR based on a control efficiency of 3% (i.e., Scenario 1), ADEQ based the state’s analysis on an assumed control efficiency of 27.5% (Scenario 2).
27. The SIP narrative should provide additional discussion on how the application of the selected cost-effective threshold is reasonable as it relates to the four boilers at the Domtar Ashdown Mill evaluated in the four factor analysis, especially considering no add-on or improvements to existing controls were selected for any of the boilers. We provide additional comments related to ADEQ’s selection of the cost-effective threshold elsewhere in this document.

28. The draft SIP narrative at page 141 states that while SNCR is technically feasible for No. 3 Power Boiler, the NO_x emission reduction capability of SNCR as applied to No. 3 Power Boiler is limited due to the wide variability in operation temperature at No. 3 Power Boiler. The Regional Haze Rule requires that in establishing its long-term strategy, a state must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. 40 CFR 51.308(f)(2)(iii). Consistent with this requirement, ADEQ must include documentation in the SIP revision to support the assessment concerning No. 3 Power Boiler. Additionally, the SIP narrative states that “DEQ has performed calculations based on the SNCR control efficiency assumed in the 2016 EPA FIP for comparison with Domtar’s SNCR operational assumptions.” Please indicate where these calculations are located in the draft SIP and explain what ADEQ determined based on these calculations and how it relates to its reasonable progress goals, as the SIP narrative is unclear on this point.
29. Footnote 202 on page 136 of the SIP narrative references revised cost calculations for Domtar in “Appendix X.” Please revise the footnote to indicate that the revised calculations are found in Appendix H.
30. On page 137 of the draft SIP narrative, please specify in Table 21 the year range for the SO₂ and NO_x baseline emissions assumed in the four factor analysis for No. 2 Power Boiler. We also note that EPA recently took final action to approve SO₂ and NO_x emission limits for No. 2 Power Boiler in the Arkansas Regional Haze Phase III SIP Revision addressing the first planning period. ADEQ should consider these recently approved emission limits in establishing the SO₂ and NO_x baselines for No. 2 Power Boiler in the four factor analysis for the second planning period. EPA’s guidance on regional haze SIP development for the second planning period explains that “Enforceable requirements are one reasonable basis for projecting a change in operating parameters and thus emissions” when selecting the baseline for the four-factor analysis. See Guidance on Regional Haze State Implementation Plans for the Second Implementation Period at 29.
31. In Appendix H are PDF pages² taken from the Arkansas Regional Haze FIP TSD that contain parts of EPA’s BART analysis for the Domtar Ashdown Mill. The location/placement of these pages within Attachment A without a cover page identifying them as part of EPA’s FIP TSD make it appear as though they are part of the analysis produced by Domtar. To avoid confusion, please consider adding a cover page or header/footer identifying these pages as an excerpt from EPA’s Arkansas Regional Haze FIP TSD.
32. On page 135 of the draft SIP narrative, there are some incorrect statements regarding the NO_x control requirements for No. 2 Power Boiler under the Arkansas FIP. The SIP narrative states that the FIP required a NO_x BART emission limit of 207.4 lb/hr for No. 2 Power

² pages 49 – 58, 67 – 69, 114 – 123, 132 – 134, 187 – 196, and 205 – 207

Boiler, which was based on no new controls for NO_x. This should be corrected to state that the FIP required a NO_x BART emission limit of 345 lb/hr that was based on the installation of low NO_x burners.

Flint Creek Power Plant

33. On page 144, ADEQ makes the determination that no further analysis of potential controls for SO₂ is necessary for this planning period based on the plant's existing controls. ADEQ must provide additional information and an explanation as to how the existing controls and existing emission limits fulfill their reasonable progress requirements. Additionally, if a state relies on an existing control and emission limit for reasonable progress, that limit must be either in the SIP or otherwise be federally enforceable and permanent.
34. The SIP narrative should provide additional discussion on how the application of the selected cost-effective threshold is reasonable as it relates to Flint Creek Boiler 1, especially considering no further controls were selected. We provide additional comments related to ADEQ's selection of the cost-effective threshold below.

Selection of Cost Threshold

35. We have concerns with some aspects of ADEQ's justification for the cost thresholds selected for determining whether controls are reasonable in the second planning period. ADEQ compiled dollar per ton (\$/ton) values from regional haze controls required in the first planning period, escalated these to 2019 dollars using the Chemical Engineering Plant Cost Index (CEPCI), and selected the 98th percentile \$/ton value for each emission unit type as the cost thresholds for reasonable progress in the second planning period. The selection of the 98th percentile \$/ton value is concerning, which ADEQ indicates is meant to "eliminate potential outliers that may have occurred once or twice while ensuring DEQ does not eliminate from further consideration cost/ton values that have been incurred multiple times at sources of a similar type."

First, we remind ADEQ that the first planning period involved the evaluation of controls under BART at sources that were often uncontrolled and in many cases were the highest SO₂ and NO_x emitting sources in each state. It is reasonable to expect that once the largest, often uncontrolled sources install controls in the first planning period, sources with lower emissions and thus potentially less cost-effective controls (i.e., higher \$/ton figures) will likely be pulled in for evaluation in the second and subsequent planning periods. Therefore, it may be more appropriate to select cost thresholds that are higher than the maximum \$/ton value (after escalating to 2019 dollars) of controls required in the first planning period. Even during the first period, moreover, other States and EPA reasonably imposed controls with significantly higher \$/ton costs than Arkansas, further suggesting that Arkansas has

significant discretion to impose controls with higher costs.

Second, we note that Appendix J shows that at least for the EGU boiler unit type, there were multiple EGU boilers that were required to install controls in the first planning period with \$/ton figures in the same range as the max \$/ton value. This indicates that the max \$/ton figure from the first planning period was not necessarily an outlier. Indeed, this approach imposes a less stringent cost-effectiveness threshold in the second period (98th percentile) relative to the first period (100th percentile). This is counterintuitive because the iterative nature of the regional haze planning process contemplates increasing control stringency over time.

Third, while it may be reasonable for Arkansas to apply different cost thresholds to different kinds of sources, Arkansas must provide a reasoned justification for doing so. The mere fact that some categories of sources complied with first planning period BART requirements with relatively more cost-effective controls does not mean that those categories of sources can per se reject relatively more expensive controls in the second planning period, at least absent further explanation. For instance, Arkansas calculated the 98th percentile for EGU Boilers to be \$5086 and Industrial Boilers to be \$3328. While these numbers reflect how states generally treated these sources in the first planning period (i.e., states generally required relatively more expensive controls at EGU Boilers than Industrial Boilers), this does not mean that Arkansas is automatically entitled to continue this approach in the second planning period. Since Industrial Boilers continue to have relatively more cost-effective control options available, Arkansas should consider increasing the cost threshold for Industrial Boilers. Alternatively, Arkansas should explain why continuing to use the selected cost threshold for Industrial Boilers remains appropriate, notwithstanding the iterative nature of the regional haze planning process which contemplates increasingly stringent controls over time.

We note that by taking the above comments into account, Arkansas could considerably strengthen its long-term strategy and secure significant additional emissions reductions and visibility benefits. For instance, were Arkansas to increase the cost effectiveness threshold for Industrial Boilers to the maximum aggregate cost effectiveness threshold in the first planning period (\$5193/ton), then additional controls would be identified as cost effective. These include Spray Dry Absorption at FutureFuel and increased scrubber reagent use at Domtar No. 2 Power Boiler.

36. The draft SIP narratives for both the main draft SIP and the Independence facility draft SIP state that ADEQ escalated \$/ton values from regional haze controls required in the first planning period to 2019 dollars using the Chemical Engineering Plant Cost Index (CEPCI). However, Appendix J of the main draft SIP and Appendix B of the Independence facility draft SIP indicate that \$/ton values were escalated to 2020 dollars. Please clarify to what year the \$/ton values were escalated.

Long-Term Strategy

37. ADEQ should provide more detail on what sources (or at least the sources with the biggest impacts) make up the emission reductions reflected in the “Arkansas Source-Specific Control Strategy” row in Table 43 of the SIP narrative. The draft SIP describes a number of programs under the long-term strategy section. We recommend that Arkansas clearly indicate which programs Arkansas is relying on to make reasonable progress for the second planning period. Such measures should be incorporated into the SIP or otherwise federally enforceable and permanent.

Reasonable Progress Goals

38. The reasonable progress goals deciview values for Caney Creek and Upper Buffalo (Table 40) are higher than the current (2015-2019 five year average) visibility impairment for both areas based on IMPROVE monitor data. Please explain why the state expects visibility impairment to be worse in 2028 compared to current conditions and how that is consistent with making reasonable progress towards the national goal.

Five-Year Progress Report

39. Table 5 on page 101 of the SIP narrative, which shows the implementation status for the source-specific control measures required in the first planning period, lists the interim 0.60 lb/MMBtu SO₂ BART emission limit for White Bluff Units 1 and 2 but does not make reference to the enforceable requirement for these units to cease coal combustion by December 31, 2028. Since the requirement to cease coal combustion was made enforceable by the state through a source-specific Administrative Order that was submitted as part of a regional haze SIP revision for the first planning period, and factored into ADEQ’s determination that other more stringent SO₂ controls were not cost-effective for White Bluff in the first planning period, Table 5 should make a reference to the enforceable requirement to cease coal combustion at White Bluff Units 1 and 2.
40. Table 5 on page 102 of the SIP narrative should make reference to the prohibition of burning fuel oil at Entergy Lake Catherine Unit 4 until SO₂ and PM BART determinations for the fuel oil firing scenario are approved into the SIP by EPA, which was a requirement that was made enforceable by the state through a source-specific Administrative Order that was submitted as part of a regional haze SIP revision for the first planning period.
41. The Five-Year Progress Report portion of the draft SIP presents trends by sector of NO_x, SO₂, Primary PM_{2.5}, ammonia, and VOCs between 2011 and the most recent NEI year 2017. We note that sources with CEMS that report to EPA are required use more recent data. Therefore, the appropriate “current year” for CEMS data sources (mostly EGUs) is 2019. ADEQ should add the 2019 data for these sources in the sector specific tables.

Corrections and Other Suggested Edits

42. Page 4 of the SIP narrative includes the statement “These federal and state partners work together to achieve the Regional Haze Program’s goal of eliminating visibility impairment from man-made air pollution at federal Class I areas by 2064.” We recommend deleting the words “by 2064,” as there is no statutory or Regional Haze Rule goal to eliminate visibility impairment by 2064. The year 2064 is only used as the endpoint for the URP calculation.
43. Page 8 of the SIP narrative includes the statement “EPA guidance allows states to adjust the URP formula to account for international anthropogenic sources. DEQ has adjusted the URP for each Arkansas federal Class I area to account for international anthropogenic emissions in accordance with EPA guidance.” The Regional Haze Rule at 40 CFR 51.308(f)(1)(vi)(B) allows adjustment of the URP. We recommend these statements in the SIP narrative be revised accordingly.
44. The SIP narrative discusses the VISTAS modeling results for Caney Creek at Pages 19 – 20. ADEQ notes that “The projected most impaired days impairment value in 2028 at Caney Creek is higher than the 2019 monitor observation and 2015 – 2019 five-year average of monitor observations.” We suggest adding a couple of sentences here explaining whether this is a realistic projection given current emissions trends and on-the-books controls and shutdowns. This comment also applies to Page 32, which discusses the VISTAS modeling results for Upper Buffalo. We also note that Page 32 incorrectly refers to Caney Creek instead of Upper Buffalo.

Droke, Erika

From: Droke, Erika
Sent: Wednesday, August 18, 2021 8:08 AM
To: Droke, Erika
Subject: Arkansas Asking for Review of Selected 2028-projected EGU Emissions

From: Leath, Mark [<mailto:mark.leath@dnr.mo.gov>]
Sent: Tuesday, June 15, 2021 11:41 AM
To: Clark, David
Cc: Treece, Tricia; Droke, Erika; Hossan, Iqbal; Wilbur, Emily; Alsharafi, Adel
Subject: RE: Arkansas Asking for Review of Selected 2028-projected EGU Emissions

Hi David,

Thanks for giving us the chance to review the 2028 emission projections for our facilities. As we discussed last week, the only Missouri sources that are included in your spreadsheet are those that were included in the “ask” letter that you had sent to us earlier in the planning process for the 2nd Regional Haze SIP. However, there are other EGUs in Missouri that are expected to be operating in 2028 that are not included on your spreadsheet.

We offer the following comments regarding the Missouri facilities and emissions/rates included in the ERTAC v.16.1_2028 spreadsheet you sent us:

- The spreadsheet accounts for all units at all five Missouri facilities (no units missing)
- The NOx and SO2 emission rates and emission projections for 2028 seem reasonable for all units at Labadie, Rush Island, and John Twitty
- The SO2 emission rates and emission projections for 2028 seem reasonable for all units at New Madrid and Thomas Hill
- The NOx rates at New Madrid and Thomas Hill seem reasonable if these units were to not operate their SCR's at all during 2028. However, we are currently working towards an enforceable agreement for these two facilities that would ensure that they run their SCR's year-round. Assuming we get the agreement in place and EPA approves our SIP, the projected emission rates for all units at these two facilities would be much less than what is listed on the spreadsheet. (Likely somewhere in the 0.12 lb/mmBTU – 0.18 lb/mmBTU range would be a more accurate assumption).

Let me know if you have any questions. I appreciate you reaching out.

Thank you,

Mark Leath, P.E.
SIP Unit Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

Promoting, Protecting and Enjoying our Natural Resources. Learn more at www.dnr.mo.gov.

From: Clark, David
Sent: Friday, June 11, 2021 9:26 AM
To: 'walker.williamson@tceq.texas.gov' ; 'Stephanie.Shirley@Tceq.Texas.Gov' ; 'Cooper.Garbe@deq.ok.gov' ;

'Melanie.foster@deq.ok.gov' ; 'Vivian.Johnson2@la.gov' ; 'Vennetta.Hayes@LA.GOV' ; Leath, Mark ; Wilbur, Emily ; 'kelly.lewis@ky.gov' ; 'rory.davis@illinois.gov' ; 'sdeloney@idem.in.gov'
Cc: 'adelman@ladco.org' ; 'Michael Vince' ; 'clafontaine@metro4-sesarm.org' ; Treece, Tricia ; Droke, Erika ; Hossan, Iqbal
Subject: Arkansas Asking for Review of Selected 2028-projected EGU Emissions

Greetings from Arkansas,

For CAMx modeling purposes, could you please review your state's facilities in the attached spreadsheet, which contains selected ERTAC EGU v16.1 facility identification information, Unit IDs, projected 2028 average emission rates in lb/MMBtu, and projected 2028 (2016 base year) SO₂ and NO_x annual emissions. We would like confirmation of the below items, taking into account changes due to any anticipated Regional Haze Planning Period II control strategies and any other anticipated changes:

1. Are the SO₂ and NO_x annual emissions (columns F and H respectively) reasonable projections of 2028 emissions that reflect any control strategy your state plans to adopt or other changes the facility may be making independent of Regional Haze SIPs. We have also included for your reference the average SO₂ and NO_x emission rate in lb/MMBtu assumed for each unit (columns G and I respectively). If the 2028 annual emissions projection or emissions rate for SO₂ and/or NO_x are not reasonable, then please suggest alternative values in column J with an explanation for the suggested alternative values;
2. That the Units contained in the spreadsheet that include non-zero values in columns F – I will be the only active 2028 Units associated with the facility and that Units with projected 2028 zero emissions values are correct;

Our apologies up front that we are on a tight schedule and it would be most helpful if you could complete a review and reply to this ask by COB Friday, June 18, 2021. As always, feel free to reach out to us with any questions.

Thank you in advance for your assistance,

David & the rest of the AR DEQ Team

David W. Clark | Technical Section Supervisor
Division of Environmental Quality | Office of Air Quality |
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ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

From: William Garbe <Cooper.Garbe@deq.ok.gov>
Sent: Tuesday, June 15, 2021 10:47 AM
To: Clark, David
Cc: Treece, Tricia; Melanie Foster; Droke, Erika; Hossan, Iqbal
Subject: Re: Arkansas Asking for Review of Selected 2028-projected EGU Emissions

Good morning David,

The information you pulled from ERTAC on Hugo, GRDA and Muskogee looks reasonable and what we expect. The only caveat I would add is regarding your question 2:

Muskogee fuel-switched units 4 and 5 from coal to natural gas. I believe ERTAC "shuts down" the original fuel unit and starts a new unit with the same name and new fuel. Therefore, there should be a separate Muskogee Unit 4 and 5 fueled by natural gas, meaning the answer to question 2 is no, the units listed are not the only active at that facility.

Please let me know if I need to elaborate more or dig a little deeper, or if you have any further questions.

Thanks,
Cooper

William Cooper Garbe

Oklahoma DEQ
Air Quality - Rules and Planning
405-702-4169

From: Clark, David
Sent: Friday, June 11, 2021 9:25 AM
To: 'walker.williamson@tceq.texas.gov'; 'Stephanie.Shirley@Tceq.Texas.Gov'; William Garbe; Melanie Foster; 'Vivian.Johnson2@la.gov'; 'Vennetta.Hayes@LA.GOV'; 'mark.leath@dnr.mo.gov'; 'emily.wilbur@dnr.mo.gov'; 'kelly.lewis@ky.gov'; 'rory.davis@illinois.gov'; 'sdeloney@idem.in.gov'
Cc: 'adelman@ladco.org'; 'Michael Vince'; 'clafontaine@metro4-sesarm.org'; Treece, Tricia; Droke, Erika; Hossan, Iqbal
Subject: [EXTERNAL] Arkansas Asking for Review of Selected 2028-projected EGU Emissions

Greetings from Arkansas,

For CAMx modeling purposes, could you please review your state's facilities in the attached spreadsheet, which contains selected ERTAC EGU v16.1 facility identification information, Unit IDs, projected 2028 average emission rates in lb/MMBtu, and projected 2028 (2016 base year) SO₂ and NO_x annual emissions. We would like confirmation of the below items, taking into account changes due to any anticipated Regional Haze Planning Period II control strategies and any other anticipated changes:

1. Are the SO₂ and NO_x annual emissions (columns F and H respectively) reasonable projections of 2028 emissions that reflect any control strategy your state plans to adopt or other changes the facility may be making independent of Regional Haze SIPs. We have also included for your reference the average

SO₂ and NO_x emission rate in lb/MMBtu assumed for each unit (columns G and I respectively). If the 2028 annual emissions projection or emissions rate for SO₂ and/or NO_x are not reasonable, then please suggest alternative values in column J with an explanation for the suggested alternative values;

2. That the Units contained in the spreadsheet that include non-zero values in columns F – I will be the only active 2028 Units associated with the facility and that Units with projected 2028 zero emissions values are correct;

Our apologies up front that we are on a tight schedule and it would be most helpful if you could complete a review and reply to this ask by COB Friday, June 18, 2021. As always, feel free to reach out to us with any questions.

Thank you in advance for your assistance,

David & the rest of the AR DEQ Team

David W. Clark | Technical Section Supervisor

Division of Environmental Quality | Office of Air Quality |

Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

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ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

From: Poff, Leslie M (EEC) <LeslieM.Poff@ky.gov>
Sent: Wednesday, June 16, 2021 9:59 AM
To: Clark, David
Cc: Lewis, Kelly (EEC)
Subject: FW: Arkansas Asking for Review of Selected 2028-projected EGU Emissions
Attachments: Copy of ERTACv16.1_2028_selected_unit_level_activity.xlsx

Good morning,

Please see the attached spreadsheet which includes updated emissions data for the TVA-Shawnee units. Let me know if you have any questions or need further information.

Thanks.

Leslie Poff
Kentucky Division for Air Quality
300 Sower Blvd., 2nd Floor
Frankfort, KY 40601
Phone: 502-782-6735

From: Clark, David <CLARKD@adeq.state.ar.us>
Sent: Friday, June 11, 2021 10:25 AM
To: 'walker.williamson@tceq.texas.gov' <walker.williamson@tceq.texas.gov>; 'Stephanie.Shirley@Tceq.Texas.Gov' <Stephanie.Shirley@Tceq.Texas.Gov>; 'Cooper.Garbe@deq.ok.gov' <Cooper.Garbe@deq.ok.gov>; 'Melanie.foster@deq.ok.gov' <Melanie.foster@deq.ok.gov>; 'Vivian.Johnson2@la.gov' <Vivian.Johnson2@la.gov>; 'Vennetta.Hayes@LA.GOV' <Vennetta.Hayes@LA.GOV>; 'mark.leath@dnr.mo.gov' <mark.leath@dnr.mo.gov>; 'emily.wilbur@dnr.mo.gov' <emily.wilbur@dnr.mo.gov>; Lewis, Kelly (EEC) <kelly.lewis@ky.gov>; 'rory.davis@illinois.gov' <rory.davis@illinois.gov>; 'sdeloney@idem.in.gov' <sdeloney@idem.in.gov>
Cc: 'adelman@ladco.org' <adelman@ladco.org>; 'Michael Vince' <mvince@censara.org>; 'clafontaine@metro4-sesarm.org' <clafontaine@metro4-sesarm.org>; Treece, Tricia <treecep@adeq.state.ar.us>; Droke, Erika <droke@adeq.state.ar.us>; Hossan, Iqbal <iqbal.hossan@adeq.state.ar.us>
Subject: Arkansas Asking for Review of Selected 2028-projected EGU Emissions

Greetings from Arkansas,

For CAMx modeling purposes, could you please review your state's facilities in the attached spreadsheet, which contains selected ERTAC EGU v16.1 facility identification information, Unit IDs, projected 2028 average emission rates in lb/MMBtu, and projected 2028 (2016 base year) SO₂ and NO_x annual emissions. We would like confirmation of the below items, taking into account changes due to any anticipated Regional Haze Planning Period II control strategies and any other anticipated changes:

1. Are the SO₂ and NO_x annual emissions (columns F and H respectively) reasonable projections of 2028 emissions that reflect any control strategy your state plans to adopt or other changes the facility may be making independent of Regional Haze SIPs. We have also included for your reference the average SO₂ and NO_x emission rate in lb/MMBtu assumed for each unit (columns G and I respectively). If the 2028

annual emissions projection or emissions rate for SO₂ and/or NO_x are not reasonable, then please suggest alternative values in column J with an explanation for the suggested alternative values;

2. That the Units contained in the spreadsheet that include non-zero values in columns F – I will be the only active 2028 Units associated with the facility and that Units with projected 2028 zero emissions values are correct;

Our apologies up front that we are on a tight schedule and it would be most helpful if you could complete a review and reply to this ask by COB Friday, June 18, 2021. As always, feel free to reach out to us with any questions.

Thank you in advance for your assistance,

David & the rest of the AR DEQ Team

David W. Clark | Technical Section Supervisor
Division of Environmental Quality | Office of Air Quality |
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0070 | e: clarkd@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

From: Vivian Johnson (DEQ) <Vivian.Johnson2@la.gov>
Sent: Friday, July 23, 2021 1:56 PM
To: Clark, David
Cc: Vennetta Hayes
Subject: RE: Cleco Dolet Hills Question

Hi David,

We do not have an enforceable mechanism as of yet; we will use an Administrative Order on Consent in the SIP stating that as of 12/21/21 emissions limits will be zero. A copy of the draft AOC is in the proposal.

Once the facility shuts down, the operating permit will be withdrawn.

I do know that our Public Service Commission has been advised that the facility is shutting down and that it has been approved.

I am not sure if this will qualify such that you are able to remove the emissions from the model so that you will have good results, but it is all I have at the moment.

Let me know if you need anything else!

Vivian H. Johnson
Environmental Scientist Manager
Air Planning and Assessment Division, OEA
La. Department of Environmental Quality
225-219-3482
vivian.johnson2@la.gov

From: Clark, David
Sent: Friday, July 23, 2021 1:32 PM
To: Vivian Johnson (DEQ)
Subject: Cleco Dolet Hills Question

EXTERNAL EMAIL: Please do not click on links or attachments unless you know the content is safe.

Hello Vivian,

Greetings from Arkansas. I have a regional haze-related question. I have seen that Cleco has stated that it intends to retire the Dolet Hills facility by the end of 2021, but has this been made enforceable and permanent with Louisiana or EPA? If so, would you be able to send me the enforceable document? I'm asking because we are going to conduct some CAMx modeling runs and want to zero this facility out if it has an enforceable agreement to close.

Thank you in advance for any insight,
David

David W. Clark | Technical Section Supervisor
Division of Environmental Quality | Office of Air Quality |
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0070 | e: clarkd@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

Droke, Erika

From: Treece, Tricia
Sent: Friday, July 30, 2021 9:17 AM
To: Clark, David; Droke, Erika
Subject: FW: Consultation on Missouri Pre-Proposal Draft Regional Haze Planning Period II SIP Revision
Attachments: 07-30-2021-formal-consultation-letter-to-arkansas.pdf
Follow Up Flag: Follow up
Flag Status: Flagged
Categories: REGIONAL HAZE WORK

Tricia Treece | Deputy Associate Director
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Alsharafi, Adel [<mailto:adel.alsharafi@dnr.mo.gov>]
Sent: Friday, July 30, 2021 9:12 AM
To: Montgomery, William
Cc: Wilbur, Emily; Leath, Mark; Basham, Aaron; Treece, Tricia
Subject: Consultation on Missouri Pre-Proposal Draft Regional Haze Planning Period II SIP Revision

William,

Attached please find a letter from the Missouri Department of Natural Resources' Air Pollution Control Program regarding consultation on our pre-proposal draft Regional Haze Planning Period II SIP Revision documents. The Air Program put the pre-proposal draft SIP revision documents at the State of Missouri Secure File Transfer Server (<https://moftp.mo.gov/>). You should receive two additional emails. The first email contains your assigned user ID and password to be able to access the server. The second email contains a link to download the draft SIP documents. You will be asked to provide your assigned ID and password when you click the link. Please note that all documents are draft working documents and are subject to change prior to final proposal. Please let us know if you have any issues downloading the documents

Thanks,

Adel Alsharafi
Department of Natural Resource

Air Pollution Control Program
State Implementation Unit
(753) 751-4817



Missouri Department of dnr.mo.gov **NATURAL RESOURCES**

Michael L. Parson, Governor

Dru Buntin, Acting Director

July 30, 2021

William Montgomery
Associate Director
Office of Air Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality
Email: Montgomery@adeq.state.ar.us

Sent Via Electronic Mail

Re: Notification of Opportunity for Consultation; Missouri Regional Haze State Implementation Plan (SIP) Revision for Second Planning Period

Dear William Montgomery,

The Missouri Department of Natural Resources' Air Pollution Control Program (Air Program) is in the process of finalizing Missouri's State Implementation Plan (SIP) for the Second Implementation Period under the Regional Haze Rule. The SIP must address reasonable progress in mitigating visibility impairment in federal Class I areas from air pollution sources. There are two federal Class I areas located in Missouri, including the Mingo National Wildlife Refuge (Mingo) and the Hercules-Glades Wilderness area (Hercules-Glades).

This letter is intended to notify you that the Air Program has prepared a pre-proposal draft Regional Haze SIP revision for the second planning period. The pre-proposal draft SIP revision four factor analyses for several of Missouri's sources include: Ameren Missouri – Labadie Energy Center, Ameren Missouri – Rush Island Energy Center, Associated Electric Cooperative, Inc. – New Madrid Power Plant, City Utilities of Springfield – John Twitty Energy Center, and Associated Electric Cooperative, Inc. – Thomas Hill Energy Center. In your February 4, 2020 letter, you identified the above sources as reasonably anticipated to impact visibility conditions at the Upper Buffalo Class I area based on results of your area of influence analysis.

This notification is intended to provide your agency with an opportunity for sixty days consultation period on our SIP revision in accordance with 40 CFR 51.308(i). We would appreciate if you take time to review our pre-proposal draft SIP revision. The Air Program is requesting that you provide any discussion points and comments by September 28, 2021. You may send written comments on the pre-proposal draft to mark.leath@dnr.mo.gov.

The Air Program put the pre-proposal draft SIP revision at the State of Missouri Secure File Transfer Server (<https://moftp.mo.gov/>). You should receive two emails. The first email contains



Droke, Erika

From: Droke, Erika
Sent: Wednesday, September 29, 2021 8:58 AM
To: 'adel.alsharafi@dnr.mo.gov'; Leath, Mark; Wilbur, Emily; 'LeslieM.Poff@ky.gov'; 'kelly.lewis@ky.gov'; 'Cooper.Garbe@deq.ok.gov'; 'Melanie.foster@deq.ok.gov'; randy.strait@ncdenr.gov; tammy.manning@ncdenr.gov; 'tpm@adem.alabama.gov'; 'lbb@adem.alabama.gov'
Cc: Treece, Tricia
Subject: Regional Haze Inquiry--URP adjustments?

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

We have included the 2028 URP value from the unadjusted glidepath for the most impaired days at Class I areas in your state in the table below. Please let us know if your state expects to adjust the glidepath, which is allowed by EPA guidance, but is not required. If you do plan to adjust the URP, what is the 2028 deciview value on your adjusted glidepath? If possible, please respond to this email by Monday, October 4.

Class I Area	Most Impaired Days (deciviews)
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Sipsey (AL)	20.44
Wichita Mountains (OK)	16.06
Shining Rock (NC)	20.7

Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0542 | e: droke@adeq.state.ar.us



ARKANSAS

ENERGY & ENVIRONMENT

Droke, Erika

From: Alsharafi, Adel <adel.alsharafi@dnr.mo.gov>
Sent: Wednesday, September 29, 2021 9:44 AM
To: Droke, Erika
Cc: Wilbur, Emily; Basham, Aaron; Leath, Mark
Subject: RE: Regional Haze Inquiry--URP adjustments?

Follow Up Flag: Follow up
Flag Status: Flagged

Erika,

Missouri's RH DRAFT SIP is based on unadjusted glidepath. Mingo's 2028 unadjusted glidepath for the 20% most impaired days (dv) is 19.48. You have it as 19.47.

Thanks,

Adel

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Wednesday, September 29, 2021 8:58 AM
To: Alsharafi, Adel <adel.alsharafi@dnr.mo.gov>; Leath, Mark <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov>; 'LeslieM.Poff@ky.gov' <LeslieM.Poff@ky.gov>; 'kelly.lewis@ky.gov' <kelly.lewis@ky.gov>; 'Cooper.Garbe@deq.ok.gov' <Cooper.Garbe@deq.ok.gov>; 'Melanie.foster@deq.ok.gov' <Melanie.foster@deq.ok.gov>; randy.strait@ncdenr.gov; tammy.manning@ncdenr.gov; 'tpm@adem.alabama.gov' <tpm@adem.alabama.gov>; 'lbb@adem.alabama.gov' <lbb@adem.alabama.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: Regional Haze Inquiry--URP adjustments?

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

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Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | **Office of Air Quality**
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0542 | e: droke@adeq.state.ar.us



Droke, Erika

From: Strait, Randy P <randy.strait@ncdenr.gov>
Sent: Wednesday, September 29, 2021 10:14 AM
To: Droke, Erika; 'adel.alsharafi@dnr.mo.gov'; Leath, Mark; Wilbur, Emily; Poff, Leslie M (EEC); 'kelly.lewis@ky.gov'; 'Cooper.Garbe@deq.ok.gov'; 'Melanie.foster@deq.ok.gov'; Manning, Tammy; Martin, Tim; Bacon, Leigh
Cc: Treece, Tricia; Bartlett, Joshua W; Tardif, Elliot M; Wylie, Heather K
Subject: RE: [External] Regional Haze Inquiry--URP adjustments?

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Erika, North Carolina is not adjusting the glide path for any of the Class I areas in the state.

For Shining Rock, we are using 20.98 dv for the 2028 URP based on the updated natural conditions value for most impaired days that is in the 2020 EPA memo ([Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program](#)). In that data update, the natural conditions/endpoint for SHRO was changed to 10.25 dv from the prior value of 9.70 dv, and that shifted the glidepath accordingly. Before we made that update, the SHRO 2028 URP value we were using was indeed 20.70 dv.

Please let me know if you have any questions.

Thank you,
Randy

Randy Strait
Chief, Planning Section
Division of Air Quality
North Carolina Department of Environmental Quality

919 707 8721 office
919 724 8080 mobile
randy.strait@ncdenr.gov

1641 Mail Service Center
217 West Jones Street
Raleigh, NC 27699-1641



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Wednesday, September 29, 2021 9:58 AM
To: 'adel.alsharafi@dnr.mo.gov' <adel.alsharafi@dnr.mo.gov>; Leath, Mark <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov>; Poff, Leslie M (EEC) <lesliem.poff@ky.gov>; 'kelly.lewis@ky.gov' <kelly.lewis@ky.gov>;

'Cooper.Garbe@deq.ok.gov' <Cooper.Garbe@deq.ok.gov>; 'Melanie.foster@deq.ok.gov' <Melanie.foster@deq.ok.gov>; Strait, Randy P <randy.strait@ncdenr.gov>; Manning, Tammy <tammy.manning@ncdenr.gov>; Martin, Tim <tpm@adem.alabama.gov>; Bacon, Leigh <lbb@adem.alabama.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: [External] Regional Haze Inquiry--URP adjustments?

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

We have included the 2028 URP value from the unadjusted glidepath for the most impaired days at Class I areas in your state in the table below. Please let us know if your state expects to adjust the glidepath, which is allowed by EPA guidance, but is not required. If you do plan to adjust the URP, what is the 2028 deciview value on your adjusted glidepath? If possible, please respond to this email by Monday, October 4.

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Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0542 | e: droke@adeq.state.ar.us



Droke, Erika

From: Martin, Tim <TPM@adem.alabama.gov>
Sent: Wednesday, September 29, 2021 12:14 PM
To: Droke, Erika; 'adel.alsharafi@dnr.mo.gov'; Leath, Mark; Wilbur, Emily; 'LeslieM.Poff@ky.gov'; 'kelly.lewis@ky.gov'; 'Cooper.Garbe@deq.ok.gov'; 'Melanie.foster@deq.ok.gov'; randy.strait@ncdenr.gov; tammy.manning@ncdenr.gov; Bacon, Leigh
Cc: Treece, Tricia
Subject: RE: Regional Haze Inquiry--URP adjustments?

Follow Up Flag: Follow up
Flag Status: Flagged

Hey Erika,

We will be using the unadjusted URP for Sipsey in Alabama.

Tim

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Wednesday, September 29, 2021 8:58 AM
To: 'adel.alsharafi@dnr.mo.gov' <adel.alsharafi@dnr.mo.gov>; Leath, Mark <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov>; 'LeslieM.Poff@ky.gov' <LeslieM.Poff@ky.gov>; 'kelly.lewis@ky.gov' <kelly.lewis@ky.gov>; 'Cooper.Garbe@deq.ok.gov' <Cooper.Garbe@deq.ok.gov>; 'Melanie.foster@deq.ok.gov' <Melanie.foster@deq.ok.gov>; randy.strait@ncdenr.gov; tammy.manning@ncdenr.gov; Martin, Tim <TPM@adem.alabama.gov>; Bacon, Leigh <LBB@adem.alabama.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: Regional Haze Inquiry--URP adjustments?

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

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Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | **Office of Air Quality**
Policy and Planning Branch

5301 Northshore Drive | North Little Rock, AR 72118

t: 501.682.0542 | e: droke@adeq.state.ar.us



Droke, Erika

(font revised from KY's original email in order to convert to PDF)

From: Poff, Leslie M (EEC) [<mailto:LeslieM.Poff@ky.gov>]
Sent: Thursday, September 30, 2021 10:15 AM
To: Droke, Erika
Subject: RE: Regional Haze Inquiry--URP adjustments?

Hi Erica,

Kentucky is not adjusting the glide path for Mammoth Cave. Similar to what Randy said, the update of the natural conditions value changed the final dv. The change is incredibly small but, we are using 21.82 dv for the 2028 URP. Let me know if you need any further information.

Leslie
#

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Wednesday, September 29, 2021 9:58 AM
To: 'adel.alsharafi@dnr.mo.gov' <adel.alsharafi@dnr.mo.gov>; Leath, Mark <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov>; Poff, Leslie M (EEC) <LeslieM.Poff@ky.gov>; Lewis, Kelly (EEC) <kelly.lewis@ky.gov>; 'Cooper.Garbe@deq.ok.gov' <Cooper.Garbe@deq.ok.gov>; 'Melanie.foster@deq.ok.gov' <Melanie.foster@deq.ok.gov>; randy.strait@ncdenr.gov; tammy.manning@ncdenr.gov; 'tpm@adem.alabama.gov' <tpm@adem.alabama.gov>; 'lbb@adem.alabama.gov' <lbb@adem.alabama.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: Regional Haze Inquiry--URP adjustments?

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

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Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
 5301 Northshore Drive | North Little Rock, AR 72118
 t: 501.682.0542 | e: droke@adeq.state.ar.us



Droke, Erika

From: Melanie Foster <melanie.foster@deq.ok.gov>
Sent: Thursday, September 30, 2021 3:32 PM
To: Droke, Erika
Cc: Jacob Petre; Treece, Tricia; Cheryl Bradley; Madison Miller
Subject: Re: Regional Haze Inquiry--URP adjustments?

Follow Up Flag: Follow up
Flag Status: Flagged

Erika,

In Oklahoma's draft Regional Haze SIP for Planning Period 2 we are currently using the adjusted uniform rate of progress for the most impaired days at the Wichita Mountains in 2028, in accordance with EPA's guidance, which is 17.36 deciviews. Let me know if you have any additional questions.

Thanks,



Melanie Foster

Rules & Planning Section
Air Quality Division

p: (405) 702-4218 f: (405) 402-4101

a: 707 N. Robinson Ave, P.O. Box 1677, Oklahoma City, OK 73101-1677

w: www.deq.ok.gov e: melanie.foster@deq.ok.gov

From: Droke, Erika <droke@adeq.state.ar.us>
Sent: Wednesday, September 29, 2021 8:58 AM
To: 'adel.alsharafi@dnr.mo.gov' <adel.alsharafi@dnr.mo.gov>; Leath, Mark <mark.leath@dnr.mo.gov>; Wilbur, Emily <emily.wilbur@dnr.mo.gov>; 'LeslieM.Poff@ky.gov' <LeslieM.Poff@ky.gov>; 'kelly.lewis@ky.gov' <kelly.lewis@ky.gov>; William Garbe <Cooper.Garbe@deq.ok.gov>; Melanie Foster <melanie.foster@deq.ok.gov>; randy.strait@ncdenr.gov <randy.strait@ncdenr.gov>; tammy.manning@ncdenr.gov <tammy.manning@ncdenr.gov>; 'tpm@adem.alabama.gov' <tpm@adem.alabama.gov>; 'lbb@adem.alabama.gov' <lbb@adem.alabama.gov>
Cc: Treece, Tricia <treecep@adeq.state.ar.us>
Subject: [EXTERNAL] Regional Haze Inquiry--URP adjustments?

Greetings!

Arkansas Department of Energy and Environment's Division of Environmental Quality is currently revising the state's Regional Haze Planning Period II draft plan based on feedback received on the pre-publication consultation draft SIP. We are in the process of confirming details for neighboring states' Class I Areas and expected glidepath decisions.

We have included the 2028 URP value from the unadjusted glidepath for the most impaired days at Class I areas in your state in the table below. Please let us know if your state expects to adjust the glidepath, which is allowed by EPA guidance, but is not required. If you do plan to adjust the URP, what is the 2028 deciview value on your adjusted glidepath? If possible, please respond to this email by Monday, October 4.

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Many thanks for your time!

Erika Droke | SIP/Planning Section Supervisor
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
 5301 Northshore Drive | North Little Rock, AR 72118
 t: 501.682.0542 | e: droke@adeq.state.ar.us



Droke, Erika

From: Treece, Tricia
Sent: Wednesday, January 5, 2022 7:45 AM
To: Droke, Erika; Jobe, Kelly; Clark, David; Shaddon, Mikayla
Cc: Montgomery, William
Subject: FW: Indiana's Response to the State of Arkansas for RH SIP Second Implementation Period Consultation
Attachments: Arkansas.pdf
Follow Up Flag: Follow up
Flag Status: Flagged
Categories: FOR MY REVIEW

Please review this and add it to our consultation log.

Tricia Treece | Deputy Associate Director
Division of Environmental Quality | Office of Air Quality
Policy and Planning Branch
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0055 | e: treecep@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: Boling, Jean [<mailto:JBoling@idem.IN.gov>]
Sent: Wednesday, January 5, 2022 7:40 AM
To: Montgomery, William; Treece, Tricia; Zac Adelman
Cc: DERF, MARK; Bem, Susan
Subject: Indiana's Response to the State of Arkansas for RH SIP Second Implementation Period Consultation

Good afternoon,

Please find the *State of Indiana's Response to the State of Arkansas for Regional Haze State Implementation Plan for the Second Implementation Period Consultation* document attached. This document is included in Indiana's final Regional Haze State Implementation Plan document submitted to the United States Environmental Protection Agency on December 30, 2021, and found on the Indiana Department of Environmental Management's website at the following link: [IDEM: State Implementation Plans: Regional Haze \(in.gov\)](https://www.idem.in.gov/state-implementation-plans/regional-haze).

Regards,

Jean Boling

Senior Environmental Engineer
Indiana Department of Environmental Management
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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

December 22, 2021

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Re: Response to Notification for Consultation;
Arkansas Regional Haze State Implementation
Plan for Planning Period II

Dear Mr. Montgomery:

On February 4, 2020 and March 1, 2021, Indiana received notifications for consultation from the state of Arkansas, which included an invitation to review the two pre-proposal draft revisions to the Arkansas Regional Haze State Implementation Plan SIP to address requirements for Planning Period II. In addition, the letters requested that the Indiana Department of Environmental Management consider whether performing a four-factor analysis is appropriate for sources identified in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for nitrogen oxides and sulfur dioxide are necessary to make reasonable progress towards natural visibility at Arkansas' Upper Buffalo Wilderness Area during the Regional Haze (RH) State Implementation Plans (SIP) second planning period.

Arkansas is a member of the Central States Air Resources Agencies (CENSARA), which conducted a screening analysis to identify specific sources in Arkansas and other states that warrant further analysis and evaluation for potential emission controls. The CENSARA modeling results showed visibility impacts from two of Indiana's electric generating unit sources: Duke Energy - Gibson Generating Station and AEP - Rockport Generating Station were reasonably anticipated to impact visibility conditions at the Upper Buffalo Class I area.

The Lake Michigan Air Directors Consortium (LADCO) regional planning organization conducted emissions analyses and photochemical modeling in support of its member states to assist with the development of their Regional Haze RH SIPs. Final source apportionment modeling results from LADCO were not available to IDEM in order to formulate an adequate response to the Arkansas request until June of 2021.

The results of LADCO's modeling exercise, as well as emissions evaluations for the sources identified by Arkansas are detailed in Indiana's response to the Arkansas request within the attached document. Indiana's response emphasizes that LADCO's modeling results and the emissions analyses do in fact support Indiana's position that the state is meeting its RH obligations to the surrounding states with Class I areas and no further analysis is necessary for the sources identified by Arkansas.

This response consists of one (1) hard copy of the requested information and electronic versions of the response to the Arkansas request in PDF format sent to the Arkansas Department of Energy and Environment, Division of Environmental Quality. Thank you for initiating consultation on this important matter. If you have any questions or need additional information, please contact Jean Boling, Environmental Engineer, Air Quality Planning Section, Office of Air Quality, at (317) 232-8228 or jboling@idem.IN.gov.

Sincerely,



Matt Stuckey
Assistant Commissioner
Office of Air Quality

MS/sd/md/sb/jb
Enclosures

1. Arkansas Request letters for RH Reasonable Progress Analysis for Indiana Sources Impacting Arkansas Class I Areas
2. State of Indiana's Response to Arkansas Request for RH SIP for the Second Implementation Period Consultation, Electric Generating Units Nitrogen Oxides and Sulfur Dioxide Reasonable Progress Emissions Reduction and Visibility Analysis

cc: Tricia Treece, Arkansas Department of Energy and Environment, Division of Environmental Quality, Office of Air Quality
Zac Adelman, Lake Michigan Air Directors Consortium (w/ enclosures)
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Jean Boling, IDEM-OAQ (w/ enclosures)
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**STATE OF INDIANA'S RESPONSE
TO THE
STATE OF ARKANSAS
FOR
REGIONAL HAZE STATE IMPLEMENTATION PLAN
FOR THE
SECOND IMPLEMENTATION PERIOD CONSULTATION**

**Electric Generating Units
Nitrogen Oxides and Sulfur Dioxide
Reasonable Progress Emissions Reduction and Visibility Analysis**

Prepared by:
The Indiana Department of Environmental Management
December 2021

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ACRONYMS/ABBREVIATIONS LIST

AoI	Area of Influence
BACT	Best Available Control Technology
BART	Best Available Retrofit Technology
CAA	Clean Air Act
CAMD	Clean Air Markets Division
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
EGU	Electric Generating Units
EPA	United States Environmental Protection Agency
ERTAC	Eastern Regional Technical Advisory Committee
ETS	Emission Tracking System
FGD	Flue Gas Desulfurization
FLMs	Federal Land Managers
IDEM	Indiana Department of Environmental Management
IMPROVE	Interagency Monitoring of Protected Visual Environments
IPM	Integrated Planning Model
IRP	Integrated Resource Plan
LADCO	Lake Michigan Air Directors Consortium
lb/MMscf	Pound Per Million Standard Cubic Foot
lb/MMBtu	Pound Per Million British Thermal Units
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NEEDS	National Electric Energy Demand System
NG	Natural Gas
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
MARAMA	Mid-Atlantic Regional Air Management Association
MMBtu	Million British Thermal Unit
MMBtu/hr	Million British Thermal Unit Per Hour
PSAT	Particulate Matter Source Apportionment Technology
RH	Regional Haze
RPGs	Reasonable Progress Goals
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SMOKE	Sparse Matrix Operator Kernel Emissions
SO ₂	Sulfur Dioxide
tons/yr	Tons Per Year
VISTAS	Visibility Improvement State and Tribal Association of the Southeast

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1.0 BACKGROUND

The Indiana Department of Environmental Management (IDEM) received a request from the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) to consider whether performing a four-factor analysis is appropriate for sources identified in accordance with 40 CFR 51.308(f)(2)(i) and, if so, whether any control measures for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) are necessary to make reasonable progress towards natural visibility at Arkansas' Upper Buffalo Wilderness Area during the Regional Haze (RH) State Implementation Plan (SIP) second planning period.

Arkansas is a member of the Central States Air Resources Agencies (CENSARA), which conducted a screening analysis to identify specific sources in Arkansas and other states that warrant further analysis and evaluation for potential emission controls. The CENSARA modeling results showed visibility impacts from two of Indiana's EGU sources: Duke Energy - Gibson Generating Station and AEP - Rockport Generating Station were reasonably anticipated to impact visibility conditions at the Upper Buffalo Class I area.

2.0 INTRODUCTION

The Environmental Protection Agency (EPA) acknowledged in its "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period," dated August 20, 2019 (EPA RH SIP Guidance) that "A key flexibility of the RH program is that a state is not required to evaluate all sources of emissions in each implementation period." Twenty sources met IDEM's source selection criteria for the RH SIP four-factor analysis. Eleven of the sources are power generating stations with coal-fired electric generating units (EGUs). Instead of conducting a four-factor analysis for the eleven EGU sources for the RH SIP, IDEM chose to perform a reasonable progress analysis that consisted of a quantitative analysis of state-wide NO_x and SO₂ emission reductions from Indiana's EGU fleet for 2009-2019; photochemical modeling using 2016 NO_x and SO₂ base-year modeled emissions for all existing Indiana EGUs in 2016 to project 2028 emissions; and source apportionment modeling to assess visibility impacts from all EGUs in Indiana. However, a four-factor analysis will be conducted for the other nine non-EGUs that met the selection criteria.

Indiana's rationale for this approach is based on the guidance that an analysis of control measures is not required for every source in each implementation period. The RH Rule sets up an iterative planning process and anticipates that a state may not need to analyze control measures for all its sources in a given SIP revision. Specifically, section 51.308(f)(2)(i) of the RH Rule requires a SIP to include a description of the criteria the state used to determine the sources or groups of sources it evaluated for potential controls. Accordingly, it is reasonable and permissible for a state to distribute its own analytical work for the sources that are not selected for an analysis of control measures for purposes of the second implementation period and it may be appropriate for a state to consider whether measures for such sources are necessary to make reasonable progress in later implementation periods as stated in the EPA RH SIP Guidance, Section 3 on page 9.

The EPA RH SIP Guidance also states that a state has the flexibility to use any reasonable method for quantifying the impacts of its own emissions on out-of-state Class I areas, and it may use any reasonable assessment for this determination according to Section 2 on page 8 in the EPA RH SIP Guidance. The RH Rule does not explicitly list factors that a state must or may not consider when selecting the sources for which it will determine what control measures are necessary to make reasonable progress. A state opting to select a set of its sources to analyze must reasonably choose factors and apply them in a reasonable way given the statutory requirement to make reasonable progress towards natural visibility.

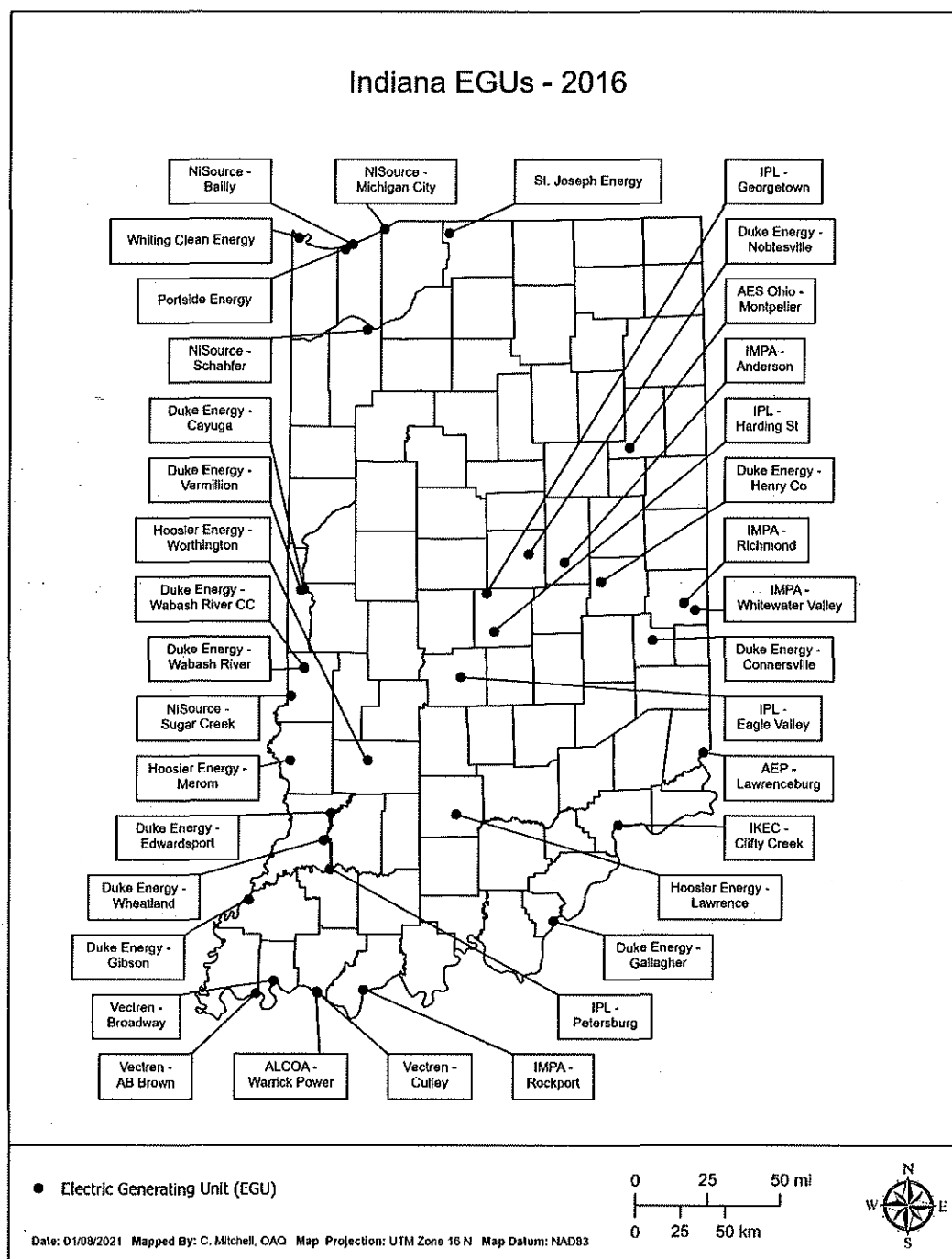
Indiana used the Q/d analysis to develop a source ranking list of the facilities in Indiana with the highest facility-wide NO_x and SO₂ emissions. The Q/d analysis is a simple surrogate metric used for quantifying and considering visibility impacts for the purpose of selecting sources to analyze for visibility impact at Class I Areas. Q/d equals the sum of the source's annual NO_x and SO₂ emissions in tons, Q, divided by the distance in kilometers (km) between the source and nearest Class I area, d. $\text{Visibility Impact} = Q (\text{NO}_x \text{ Emissions} + \text{SO}_2 \text{ Emissions}) / d (\text{Distance})$

The Q/d threshold value of five was used as the cutoff for Indiana's source selections. The threshold of five was chosen to include a reasonable number of representative sources in the state for the four-factor analysis and for consistency among the Lake Michigan Air Director Consortium (LADCO) states. Therefore, sources with Q/d values above five, with the exception of the power generating stations, were chosen for evaluation. Indiana's EGU sources were evaluated in the RH SIP for the first implementation period under the 2005 BART Guidelines. Indiana's EGU fleet has multiple retirements and shutdowns and new add-on controls state-wide that the State can take credit for when evaluating EGUs for reasonable progress for the second implementation period RH SIP. Thus, Indiana decided that conducting four-factor analyses for the EGUs would expend needless resources and provide less value for the second implementation period than it would for the next implementation period since the owners/operators of the EGU sources in Indiana are still in the process of making decisions related to more retirements and shutdowns and new add-on control modifications.

3.0 INDIANA'S ELECTRIC GENERATING UNITS

Figure 3-1 below shows a map of the existing power generating stations located in Indiana in 2016. All the electric generating units at these facilities are included in the LADCO Eastern Regional Technical Advisory Committee (ERTAC) 2016 modeling.

Figure 3-1 Map of Indiana's Power Generating Stations in 2016



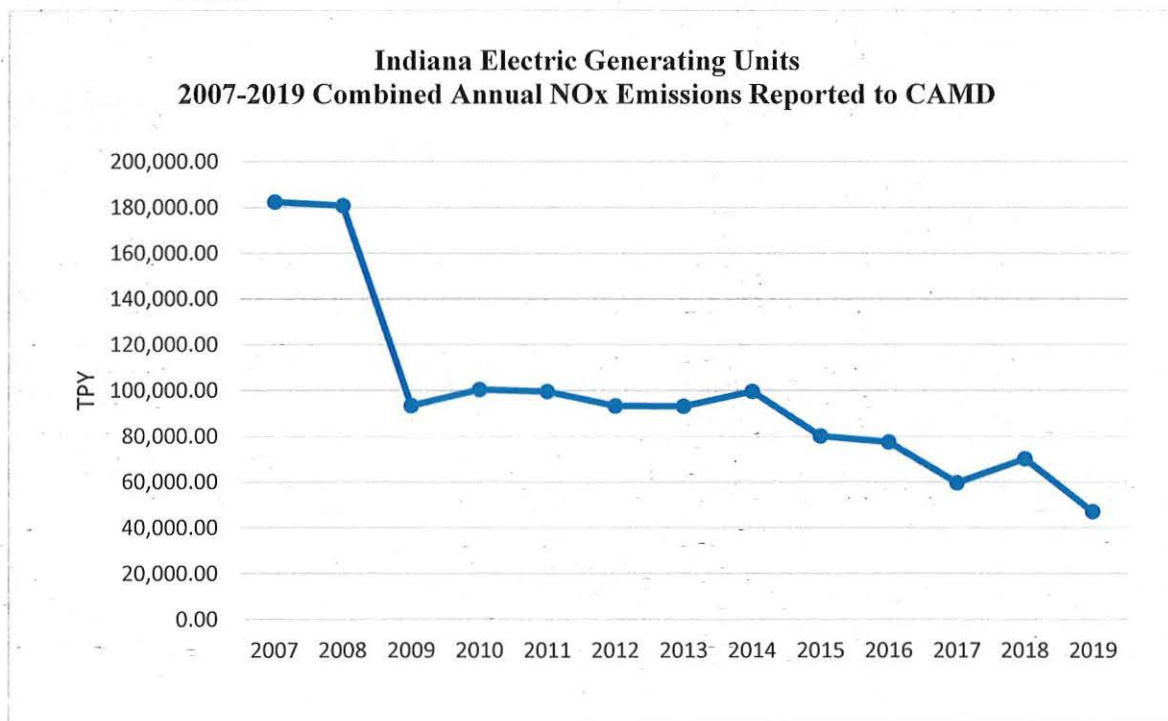
3.1 Indiana's EGUs 2007-2019 NO_x Emission Trends

The combined annual NO_x and SO₂ emissions for all EGUs throughout Indiana decreased substantially from 2007 to 2019. Graph 3-1 below and Graph 3-2 on the next page demonstrate a downward trend in both NO_x and SO₂ state-wide annual emissions for Indiana EGUs during the 13-year evaluation period. The combined annual NO_x emissions

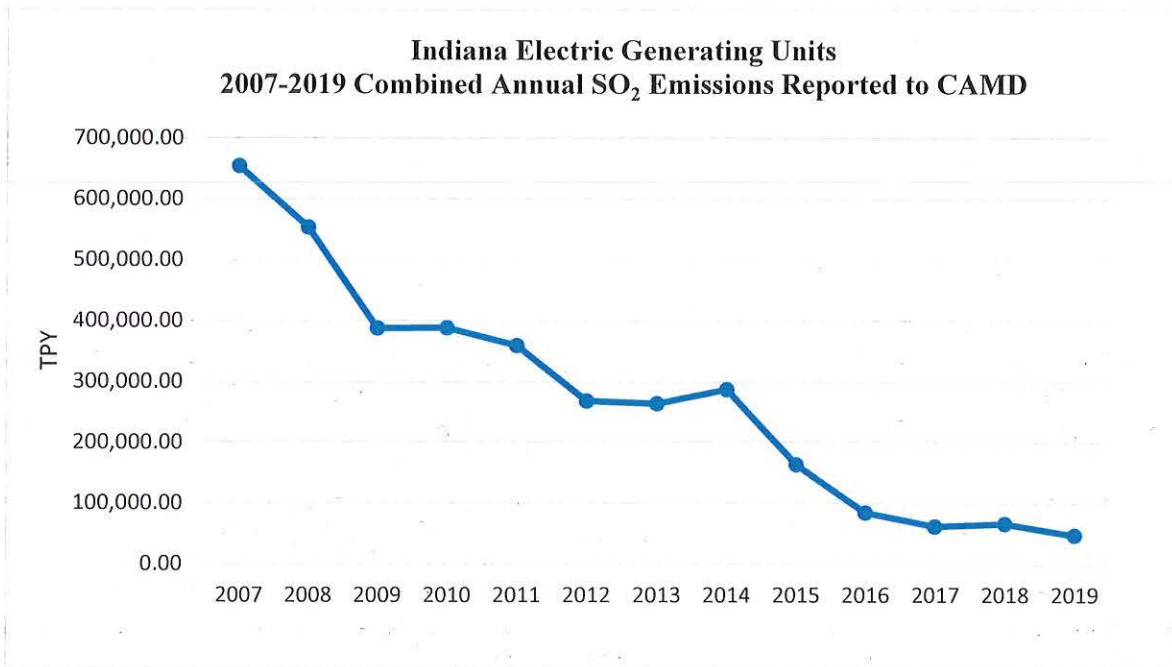
for all EGUs throughout Indiana decreased by 50%, 46,360 tons, for 2019 compared to 2011 and 39%, 30,350 tons, for 2019 compared for 2016. A more dramatic downward trend is illustrated for state-wide annual SO₂ emissions for Indiana EGUs from 2007 to 2019 as shown by the line graph in Graph 3-2. The combined annual SO₂ emissions for all EGUs throughout Indiana were drastically reduced by 81%, 210,180 tons, for 2019 compared to 2011 and 38%, 29,490 tons, for 2019 compared for 2016. State-wide NO_x and SO₂ annual emissions data for Indiana's EGUs combined from 2007 to 2019 are listed in Table 1, respectively, under the "Combined 2007-19 NO_x Emissions" tab and Table 3 under the "Combined 2007-19 SO₂ Emissions" tab in Appendix A. The actual emissions data were taken from the Clean Air Markets Division (CAMD) database.

The combined annual NO_x and SO₂ emission reductions for all EGUs throughout Indiana are a direct result of shutdowns, fuel conversions from coal to natural gas (NG) and pollution control device upgrades and new add-ons that occurred during the 11-year evaluation period. Consent decree agreements with EPA, new Federal regulations designed to reduce NO_x and SO₂ (and mercury) emissions from power plants that were implemented after 2009 and revised National Ambient Air Quality Standards have also aided in lowering state-wide emissions from all EGUs throughout Indiana from 2007 to 2019.

Graph 3-1 Indiana EGUs 2007-2019 Combined Annual NO_x Emissions Reported to CAMD



Graph 3-2 Indiana EGU 2007-2019 Combined Annual SO₂ Emissions Reported to CAMD



3.1.1 EGU Retirements and Shutdowns

The following coal fired EGUs were shut down during the 13-year evaluation period. A total of 34 coal fired EGUs have been retired and shutdown due to consent decree agreements and new Federal and state regulations implemented during the evaluation period.

Table 3-1 Indiana EGUs Retirements and Shutdowns between 2007 and 2019

Facility Name	Unit Identification	Year
Bailly Generating Station	10, 7, and 8	2018
FB Culley Generating Station	1	2007
Cayuga Generating Station	4	2009
Dean H Mitchell	4, 5, and 6	2010
Edwardsport Generating Station	7-1, 7-2, and 8-1	2010
Frank E Ratts Generating Station	1SG1	2016
	2SG1	2015
Harding Street Generating Station	9 and 10	2011
Eagle Valley Generating Station	1 and 2	2011
	4, 5, 6, and 7	2015
R Gallagher Generating Station	1 and 3	2012
State Line Generating Station	3 and 4	2012
Tanners Creek Generating Station	U1, U2, U3, and U4	2015
Wabash River Generating Station	2, 3, 4, and 5	2015
State Line Generating Station	6	2016

3.1.2 EGU Fuel Switch Conversions

Three EGUs at the Harding Generating Station (Units 50, 60, and 70) were converted from coal to natural gas fuels in 2015 and 2016. As a result, annual NO_x emissions decreased by 76% for Unit 50 (62 tons), 72% for Unit and 60 (52 tons), and 50%, for Unit 70 (382 tons) for 2019 compared to 2016. Annual SO₂ emissions from Units 50, 60, and 70 decreased by 74, 70, and 99%, respectively for 2019 compared to 2016 with reductions in tons of SO₂ emissions equal to nearly 1 ton for Units 50 and 60 and 269 tons for Unit 70. The complete results of the fuel switches were not realized until 2017. Table 2 under the EGUs 2007-2019 NO_x Emissions Tab and Table 4 under the EGUs 2007-2019 SO₂ Emissions Tab in Appendix A lists the actual NO_x and SO₂ emissions for all Indiana EGUs for 2007-2019 reported to CAMD.

Table 3-2 Indiana EGUs Fuel Conversions between 2009 and 2019

Facility Name	Unit Identification	Year
Harding Street Generating Station	50 and 60	2015
Harding Street Generating Station	70	2016

3.1.3 EGU Pollution Control Devices Upgrade and Add-on Modifications

Table 3-3 summarizes the pollution control devices upgrade and new add-on modifications to Indiana's coal fired EGUs in order to meet consent decree agreement requirements and new Federal and state regulations implemented during the 11-year evaluation period. A more detailed list of the coal fired EGU pollution control devices, control efficiencies and retirements and shutdowns is attached in Appendix B. A source-specific evaluation of the three EGU sources VISTAS identified for reasonable progress analysis is provided in Sections 4, 5, and 6.

Table 3-3 Indiana EGUs Pollution Control Devices Upgrade and New Add-on Modifications between 2009 and 2019

Facility Name	Unit Id	PM	SO ₂	NO _x	SO ₃ / H ₂ SO ₄	Hg
AB Brown Generating Station	1 & 2				Sorbent Injection	Mercury re-emission chemical injection (2015), Calcium Bromide (2016)
Alcoa Power Plant	4				Reagent Injection	
Cayuga Generating Station	1 & 2			SCR	SO ₃ Mitigation (2015)	
Clifty Creek Generating Station	1, 2, 3, 4, 5, & 6	FGD installed in 2013 (co-benefit of PM removal)	FGD became operational on all six units in 2013		Dry Sorbent Injection installed on units 1 through 5 in 2013	FGD installed in 2013 (co-benefit of Hg removal) with ability to provide chemical additives on as needed basis
FB Culley Generating Station	3				Sorbent Injection	Mercury re-emission chemical injection (2015)
Gibson Generating Station	1, 2, 3, & 5				SO ₃ Mitigation Systems	Mercury re-emission chemical injection system (2015), Calcium Bromide (2015)
	4					Calcium Bromide (2015)
Merom Generating Station	1SG1 & 2SG1		Redesigned FGDs		SO ₃ Mitigation Systems	ACI (2015)
Petersburg Generating Station	1	Upgrade ESP	Upgrade Bypass Scrubber and DSI		Reagent Injection	ACI
	2	Baghouse (2015)	Upgrade Bypass Scrubber and DSI		Reagent Injection	ACI
	3	Baghouse (2016)/ Cold-side ESP	Wet FGD upgraded in 2006		Reagent Injection	ACI
	4	Upgrade ESP	Wet FGD upgraded in 2011		Reagent Injection	ACI
R Gallagher Generating Station	2 & 4		DSI (2010)			
R M Schahfer	14		FGD (2013)	Reagent Injection System		ACI (2014)
	15		FGD (2014)	Reagent Injection System		ACI (2014)
	17		Wet FGD (2010)			
	18		Wet FGD (2009)			
Rockport Generating Station	MB1 & MB2		DSI - 2015 Enhanced DSI 2020	MB1 SCR - 2017 MB2 SCR - 2020		ACI

3.2 Indiana's EGUs Future Year NO_x and SO₂ Emissions

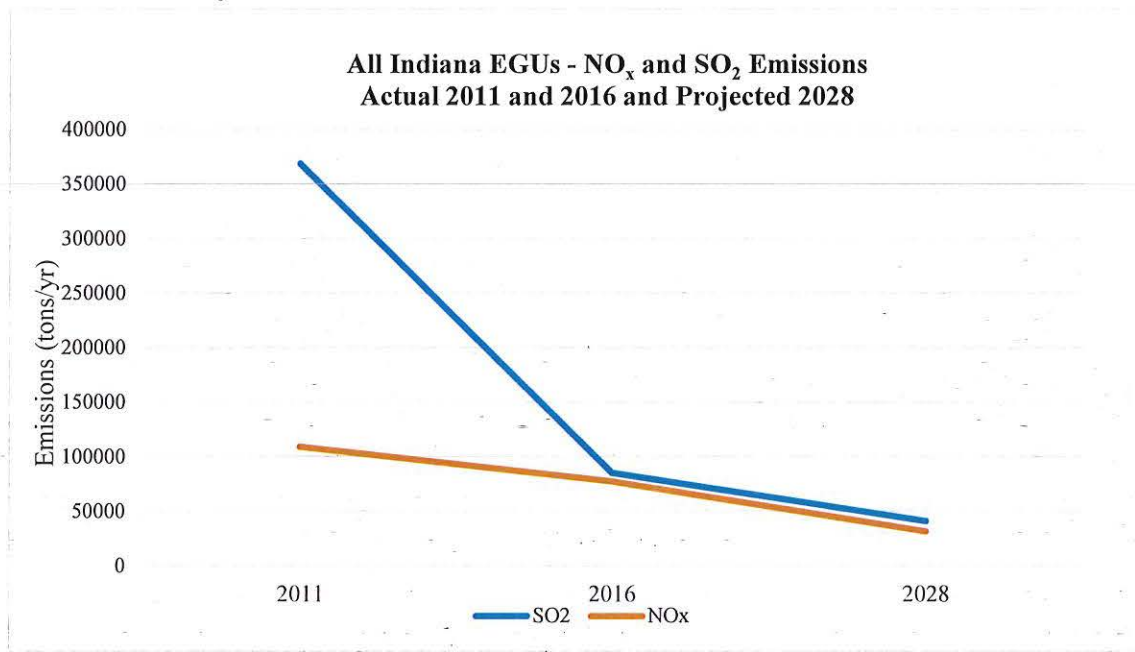
In regard to the photochemical modeling, Table 3-4 summarizes the NO_x and SO₂ emissions for EGUs throughout Indiana for modeled base-years 2011 and 2016 and projected emissions for 2028. The modeled emissions data was provided by ERTAC. The 2011 and 2016 base-year emissions are taken from the CAMD actual emissions data which is the basis of the ERTAC base runs. The net effect from the photochemical modeling evaluation shows dramatic decreases in NO_x and SO₂ emissions state-wide, not only actual emissions decreases from 2011 to 2016 but additional projected emissions decreases that are substantial for 2028.

Table 3-4 Indiana EGUs Emissions for Base-years 2011 and 2016 and ERTAC Projected 2028

All Indiana EGUs	2011 Modeled Emissions (tons)	2016 Modeled Emissions (tons)	Projected 2028 Emissions (tons)
NO _x	109,507.4	77,777.3	32,015.6
SO ₂	369,325.3	85,328.9	41,374.4

Modeled NO_x emissions were reduced by 29% and SO₂ emissions dropped dramatically with reductions equating to 77% from 2011 to 2016. As shown in Graph 3-3 on page 14, projected NO_x and SO₂ emissions for Indiana EGUs in 2028 decrease even more with NO_x emissions dropping an additional 59% from 2016 to 2028 and SO₂ emissions reduced by 52%. In total, from 2011 to 2028, Indiana's EGU NO_x and SO₂ emissions are projected to decrease by 71% for NO_x and 89% for SO₂. Graph 3-3 shows the significant downward trend for both NO_x and SO₂ emissions.

Graph 3-3 Indiana EGU Emissions Comparison: 2011 and 2016 and ERTAC Projected 2028



Future year projections are based on the latest LADCO ERTAC modeling analysis. LADCO replaced EPA's Integrated Planning Model (IPM) EGU inventories in the EPA 2011 and 2016 modeling platforms with inventories derived from the ERTAC EGU model (Mid-Atlantic Regional Air Management Association-MARAMA, 2012). The ERTAC EGU model for growth was developed around activity pattern matching algorithms designed to provide hourly EGU emissions data for air quality planning. The original goal of the model was to create low-cost software that air quality planning agencies could use for developing EGU emission projections. States needed a transparent model that did not produce dramatic changes to the emission forecasts with small changes in inputs. A key feature of the model includes data transparency; all of the inputs to the model are publicly available. The open source software includes documentation and a diverse user community to support new users of the software.

The ERTAC EGU model imports base-year Continuous Emissions Monitoring (CEM) data from EPA and sorts the data from the peak to the lowest generation hour. It applies hour specific growth rates that include peak and off peak rates. The model then balances the system for all units and hours that exceed physical or regulatory limits. ERTAC EGU applies future year controls to the emission estimates and tests for reserve electricity generating capacity, generates quality assurance reports, and converts the outputs to Sparse Matrix Operator Kernel Emissions (SMOKE)-ready modeling files.

ERTAC EGU generates hourly future year emission estimates. The model does not shutdown or mothball existing units because economic algorithms suggest they are not economically viable. Additionally, alternate control scenarios are easy to simulate with the model. Significant effort has been put into the model to prevent simulations from spawning new coal plants to meet forecasted power demand. As an alternative, the model

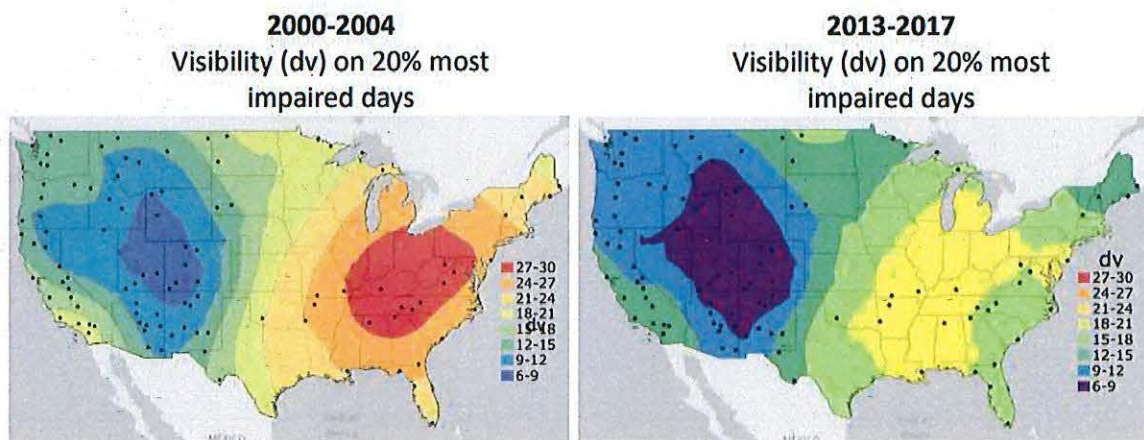
now allows portability of generation to different fuel types like renewables and NG. Differences between the IPM and ERTAC EGU emission forecasts arise from alternative forecast algorithms and from the data used to inform the model predictions.

The IPM forecasts used for the EPA “2016fh” modeling platform were based on comments from states and stakeholders received through April 2019. LADCO replaced the IPM EGU forecasts in its modeling with ERTAC EGU version 16.1. The ERTAC EGU 16.1 forecasts used CEM data from 2016 and state-reported changes to EGUs received through September 2020. The LADCO-modified ERTAC EGU 16.1 emissions used for this modeling application represent the best available information on EGU forecasts for the Midwest and Eastern United States available through September 2020.

3.3 Visibility Impacts on Class I Areas

The Interagency Monitoring of Protected Visual Environments (IMPROVE) monitored visibility values for the period of 2014 through 2018 are below the base-year 2011 - future year 2028 modeled visibility results in most instances and are nearly equal to the modeled visibility results for base-year 2016 - future year 2028, which accounts for the lower emissions base in 2016. This indicates that visibility improvements already realized are well ahead of the glidepaths of all Class I areas, especially those in the eastern half of the country that Indiana may impact. This improvement is very evident in Figure 3-5 as monitoring visibility in deciviews has improved greatly over the past decade or more.

Figure 3-2 Comparison of Visibility on 20% Most Impaired Days 2000-2017



3.4 Planned Retirements and Shutdowns for Coal fired EGUs at Indiana Power Plants

Coal fired EGUs are now becoming less financially viable for most companies. New commitments to renewable energy generation are growing each year. Many of these retirements are projected to take place between 5-10 years in the future and are not based on a court order or a permit condition. While the plans for those EGUs with planned retirements of their boilers are a mixture of court ordered requirements and power plants' Integrated Resource Plan (IRP) projections, the overall trend is clear that Indiana is making

reasonable progress. Table 3-5 shows the expected unit retirements by 2028 for many of the EGUs in Indiana.

Table 3-5 Indiana EGUs and Expected Unit Retirements by 2028

County	County ID	Plant ID	Name	Expected Unit Retirements by January 1, 2028, and not in the Modeling
Floyd	43	4	Duke Energy Indiana, LLC - Gallagher	Units 2 & 4 per the 2019 IRP for Duke and verified with source for a 2022 retirement.
Gibson	51	13	Duke Energy Indiana, LLC - Gibson	Unit 4 per the 2019 Duke IRP and verified with source by 2026.
Jasper	73	8	NIPSCO - R M Schahfer	Units 14, 15, 17 & 18 per the 2018 IRP and was added to the October 2020 NEEDS update from CAMD, verified with source for 2023.
Jefferson	77	1	Indiana-Kentucky Electric Corporation Clifty Creek	None announced.
Pike	125	2	Indianapolis Power and Light - Petersburg	AES Indiana Petersburg will retire units 1 and 2 before 2028. A determination was made to retire those units in the modeling in 2021 and 2023, respectively. This decision was made based on AES Indiana determining in their 2019 Integrated Resource Plan (IRP) that retiring those units was the "preferred low-cost option", in addition these units were identified in U.S. EPA's 2020 NEEDS update from CAMD as retiring. In addition, the source confirmed the expected retirements. Finally, AES-Petersburg is now operating under a federal Consent Decree agreement with the United States and State of Indiana (Civil Action No. 3:20-cv-202-RYL-MPB, found at www.epa.gov/sites/default/files/2020-09/documents/indianapolispowerlight-cd.pdf) and will be subject to NO _x and SO ₂ limitations for 2025 and 2026 as follows: operate the coal-fired Units 1 through 4 at the Petersburg Station so the Units combined do not emit SO ₂ in excess of an annual tonnage limitation of 10,100 tons per year and operate the coal-fired Units 1 through 4 at the Petersburg Station so the Units combined do not emit NO _x in excess of an annual tonnage limitation of 8,500 tons per year.
Posey	129	10	SIGECO - AB Brown	Units 1 & 2 are set to retire in 2023 per the 2019-2020 IRP and the dates was verified with the source.

Spencer	147	20	Indiana Michigan Power Agency dba AEP - Rockport	Rockport Plant, which is owned by AEP Indiana Michigan Power Company, AEP Generating Company, and a group of unaffiliated financial investors is operated by AEP Indiana Michigan Power Company. Under the terms of the Fifth Modification of the AEP System Eastern Fleet NSR Consent Decree signed on July 17, 2019 (www.govinfo.gov/content/pkg/FR-2019-06-07/pdf/2019-11948.pdf), Rockport Plant must install and operate Enhanced Dry Sorbent Injection Systems by June 1, 2020, on Unit 2 and by December 31, 2020 on Unit 1. SO ₂ was further limited to 10,000 tons per year from both units combined starting in 2021 through 2028 and reduced to 5,000 tons per year beginning in 2029, concurrent with the required retirement of Unit 1 by December 31, 2028. The modification requires compliance with a 0.15 lb/MMBtu 30 day rolling average SO ₂ emission rate on the combined stack beginning with the 30th SO ₂ operating day on the combined stack after January 1, 2021. The modification further required the installation and operation of SCR on Unit 2 by June 1, 2020 (SCR was installed on Unit 1 in 2017). In addition, the modification requires compliance with a 0.09 lb/MMBtu 30 day rolling average NO _x emission rate on the combined stack beginning with the 30th NO _x operating day on the combined stack after January 1, 2021. Both units at Rockport are included in the modeling for 2028.
Sullivan	153	5	Hoosier Energy Rec Inc - Merom	In the October 2020 NEEDS update from CAMD (IPM v5.15 CSAPR update retired by 2024). Retirements are also in the 20-year plan and included in the November 2020 IRP for projected retirement in 2023.
Vermillion	165	1	Duke Energy Indiana LLC - Cayuga	Unit 1 & 2 to retire per the 2019 Duke IRP. Verified with the source for a 2028 retirement.
Warrick	173	2	Alcoa Warrick Power Plant - AGC Division	Per 2019-2020 Vectren IRP exit agreement to purchase power in 2023. Unit will still operate in some capacity beyond 2023.
Warrick	173	0	SIGECO - F. B. Culley	Unit 2 projected to retire in 2023 per 2019-2020 Vectren IRP and the date was verified with source.

In addition, Indiana's coal-fired boilers will continue to dwindle in number after 2028. Based on long-range projections and IRPs, several utilities are planning on further retirements of boilers beyond 2028. Duke Gibson and Rockport are planning on retiring boilers at their facilities during the third implementation period of the Regional Haze Program. The specific units projected to retire at these facilities are shown in the following table.

Table 3-6 Indiana EGUs and Expected Unit Retirements beyond 2028 as used in the ERTAC Model

ORIS	Unit ID	Facility	State	ERTAC Region	Fuel/Unit Type Bin	Generation capacity (MW)	2016 BY Annual SO ₂ (tons)	2016 BY Annual NO _x (tons)	2028 FY Annual SO ₂ (tons)	2028 FY Annual NO _x (tons)	Retirement Date
990	GT4	IPL - Harding Street	IN	RFCW	simplecycle/g	86	0	53	1	132	1/1/44
990	GT5	IPL - Harding Street	IN	RFCW	simplecycle/g	88	0	39	1	77	1/1/30
990	GT6	IPL - Harding Street	IN	RFCW	simplecycle/g	199	1	28	3	129	1/1/30
6113	1	Gibson	IN	RFCW	coal	753	1,807	1,887	1,990	2,204	1/1/38
6113	2	Gibson	IN	RFCW	coal	720	2,340	2,953	2,619	2,092	1/1/38
6113	3	Gibson	IN	RFCW	coal	677	2,114	3,019	2,296	1,988	1/1/34
6113	5	Gibson	IN	RFCW	coal	728	5,495	3,273	6,095	2,337	1/1/34
6166	MB1	Rockport	IN	RFCW	coal	1,394	11,401	6,043	4,912	4,334	12/30/28

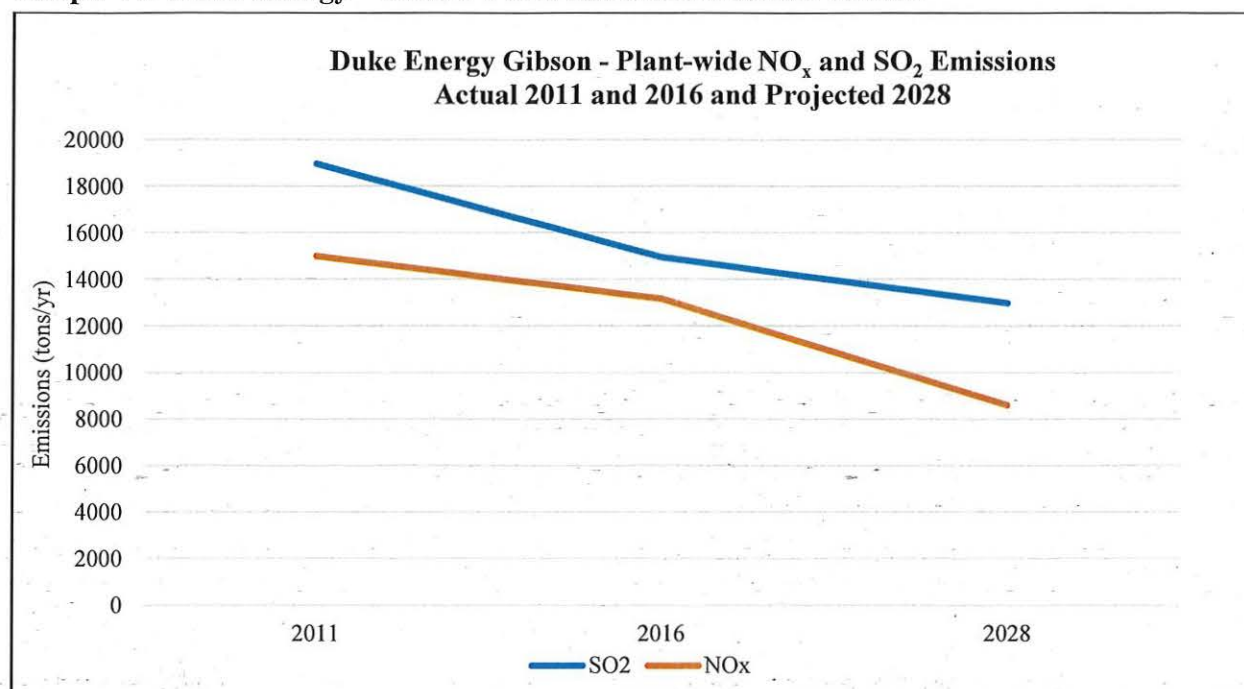
To pursue additional emission reductions through the use of new emission control equipment or emission limitations is not desired as a cost-effective method and will only drive utility rates even higher. As will be shown below, the emission reductions and modeling results show that visibility impairment from Indiana EGUs in total and particularly from Duke Gibson and AEP Rockport are decreasing as total light extinction at most all Class I areas is decreasing.

4.0 DUKE ENERGY, INC - GIBSON GENERATING STATION

Duke Energy, INC - Gibson Generating Station is located in Gibson County, in the southwestern portion of Indiana. It is a stationary electric utility generating station with a maximum generating capacity of 3,646 megawatts among five dry bottom, pulverized coal-fired boilers. Controls for these units include wet limestone fluidized-gas desulfurization units controlling SO₂ emissions with control efficiencies above 93% (based on source calculations) and selective catalytic reduction systems for NO_x emissions with control efficiencies above 81% (based on source calculations).

Gibson's EGUs NO_x emissions are projected to be reduced from 2016 to 2028 by 35% or almost 4,600 tons while SO₂ emissions are estimated to be reduced by 13% or nearly 2,000 tons. Graph 4-1 shows the actual emissions changes that have occurred and changes in emissions projected by 2028.

Graph 4-1 Duke Energy - Gibson's SO₂ and NO_x Emission Trends



Duke Energy's IRP from 2019 was updated to reflect the advancement of retirements for several of their existing coal fired EGUs. Gibson is projected to accelerate retirements of Units 1-6; however, Unit 4 is the only unit expected to retire before 2028. These retirements are part of Duke Energy's overall plan to move to a more diversified clean energy portfolio. The retirement dates for Gibson's Unit 4 were confirmed with the source in November 2020.

The projections for 2028 are determined by the ERTAC emissions model, which allocates power generation from units that will be retired before 2028. The overall emissions from each facility will be reduced because of the unit shutdowns but individual unit emissions may be slightly higher than their 2016 emissions due to power demand and limited power generation capacity with retirements of other boilers. For Gibson's future emission projections, Units 1, 2, 3, and 5 will be utilized more to meet the electricity demands without Unit 4. Gibson's unit utilization rates, both for base-year 2016 and future year 2028, are shown in Table 4-1.

Table 4-1 Gibson Generating Station's 2016 and Projected 2028 Utilization Rates for Units 1-5

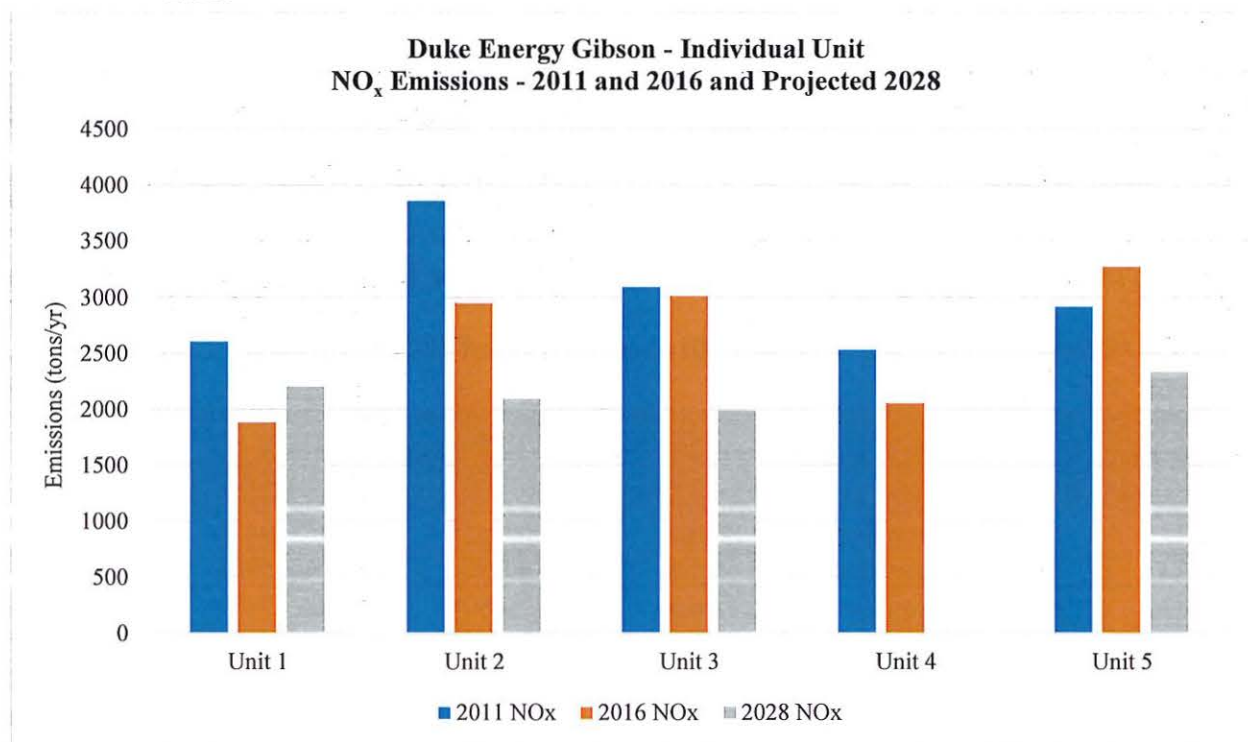
ORIS-ID	Unit ID	Facility	BY-UF 2016 ERTAC	FY-UF 2028-ERTAC	Percentage Change in Utilization
6113	1	Gibson Generating Station	0.470088650	0.5175329430	10.09%
6113	2	Gibson Generating Station	0.634009223	0.7096633900	11.93%
6113	3	Gibson Generating Station	0.615733974	0.6688487450	8.63%
6113	4	Gibson Generating Station	0.548344335	Retired	-100.00%
6113	5	Gibson Generating Station	0.572596578	0.6350943340	10.91%

These utilization rates will impact the 2028 emissions from each of the existing units; yet the overall NO_x and SO₂ emissions from the facility will decrease because of the retirement of Unit 4. In the ERTAC emissions tool, the utilization fraction as calculated from the 2016 base-year data will be used to determine dispatch order of electricity to the power grid for units that were operating in the base year. Utilization fraction is the ratio of the total average heat input to the maximum heat input for a unit. It is calculated using the following formula: total average annual heat input/(maximum hourly rated capacity * 8,760 hours/year). For future year emission projections, the ERTAC tool will dispatch generation to the coal unit fuel type according to the hourly hierarchy order up to the maximum ERTAC annual utilization fraction for that fuel/unit type bin. In the case of coal, no unit will run above 90% utilization rate in the emission model.

In the case of Gibson and the retirement of Unit 4, before the demand for additional power results in a need to make up electric generation within ERTAC's emission model, the demand is met by other coal units at the facility based on the growth rates for coal. Gibson's future year-utilization rates among Units 1, 2, 3, and 5 vary from the 2016 base-year to the 2028 projection year as a result of the retirement of Unit 4 in order to meet anticipated electricity demands based on less generation capacity.

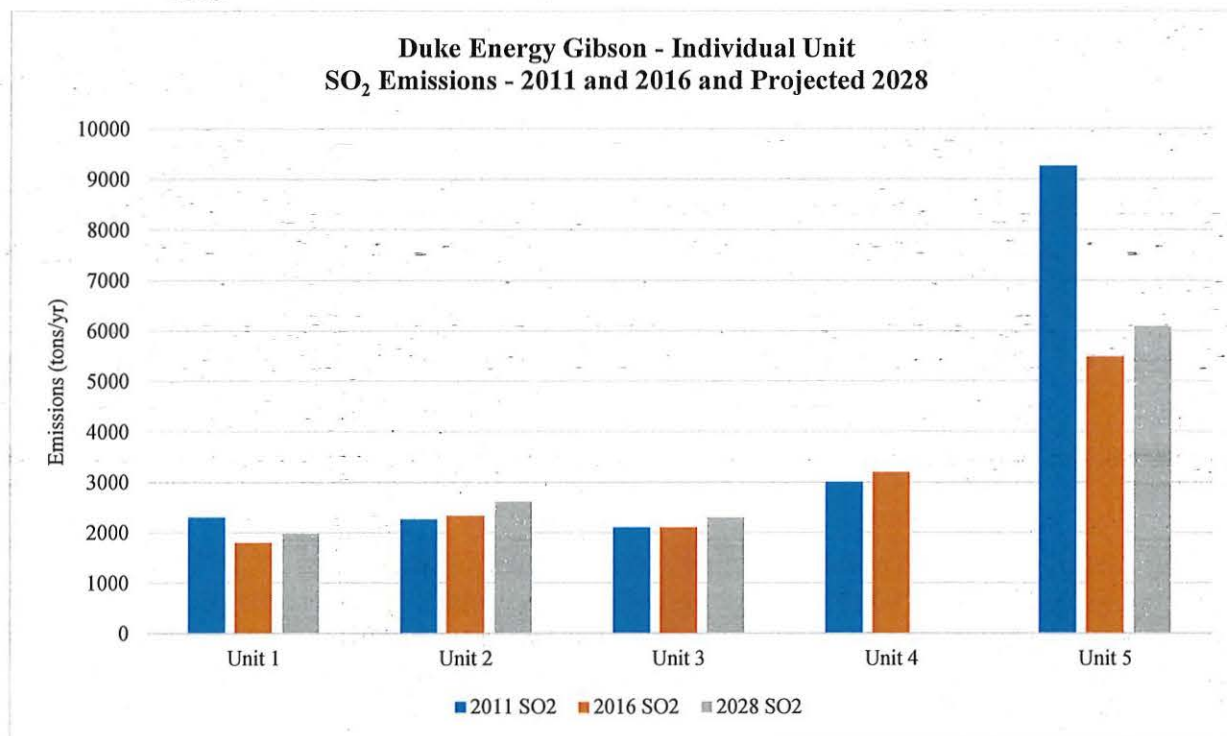
Graph 4-2 demonstrates the unit-by-unit comparison of NO_x emissions at the Duke - Gibson power plant. Note the slight increase in emissions at each of the four remaining units, this demonstrates the increase in utilization based on Unit 4's retirement to meet anticipated power demand. As with SO₂, overall NO_x emissions at Gibson are projected to decrease by 35% from 2016 to 2028.

Graph 4-2 Unit Comparison of Gibson's NO_x Emissions – Actual 2011 and 2016, Projected 2028



Graph 4-3 shows the unit-by-unit comparison of SO₂ emissions at the Duke - Gibson power plant. Note the slight increase in emissions at each of the four remaining units. This demonstrates the increase in utilization based on Unit 4's retirement. Again, overall SO₂ emissions at Gibson are projected to decrease by 13% from 2016 to 2028.

Graph 4-3 Unit Comparison of Gibson's SO₂ Emissions – Actual 2011 and 2016, Projected 2028

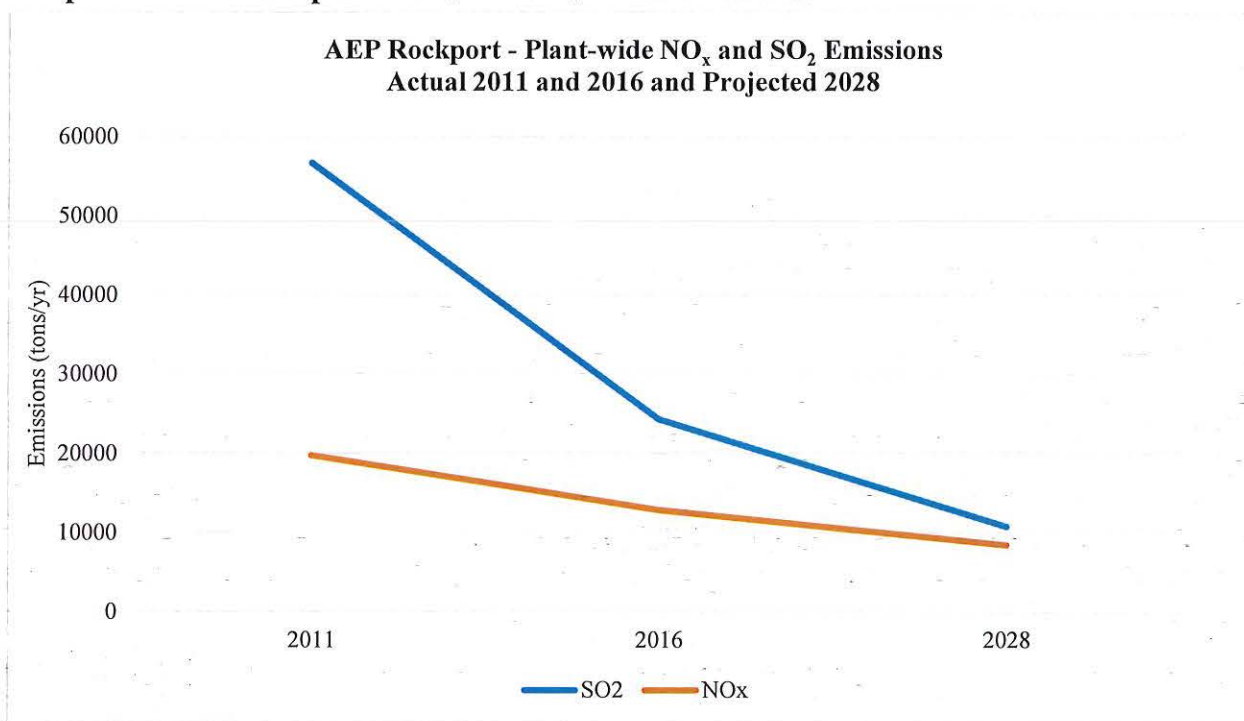


5.0 INDIANA MICHIGAN POWER COMPANY DBA AMERICAN ELECTRIC POWER - ROCKPORT GENERATING STATION

Indiana Michigan Power Company, dba American Electric Power (AEP) - Rockport Generating Station is located in Spencer County, in the southern portion of Indiana. It is a stationary electric utility generating station with a maximum generating capacity of 2,774 megawatts among two pulverized coal opposed wall fired dry bottom boilers (Units MB1 and MB2). Controls for these units include FGD units with SO₂ control efficiencies nearly 50% based on the latest 5-year average; low NO_x burner (dry bottom only) and air selective catalytic reduction systems/DSI for NO_x with control efficiencies above 57% based on the latest 5-year average.

Rockport NO_x emissions are estimated to be reduced by over 4,400 tons by 2028 or by 34% from 2016 emission levels. SO₂ emissions are undergoing greater reductions with over 13,500 tons reduced or 56% of the 2016 SO₂ emission levels by 2028 as demonstrated in Graph 5-1 on the next page.

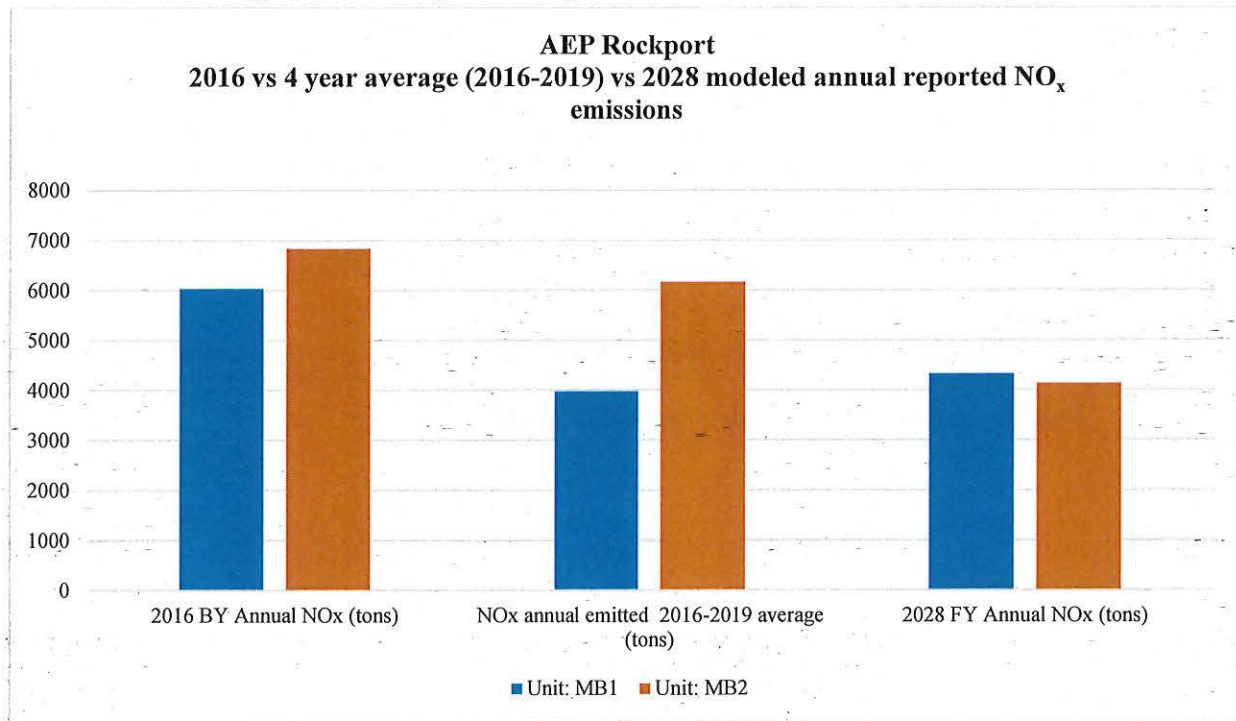
Graph 5-1 AEP Rockport's NO_x and SO₂ Emission Trends



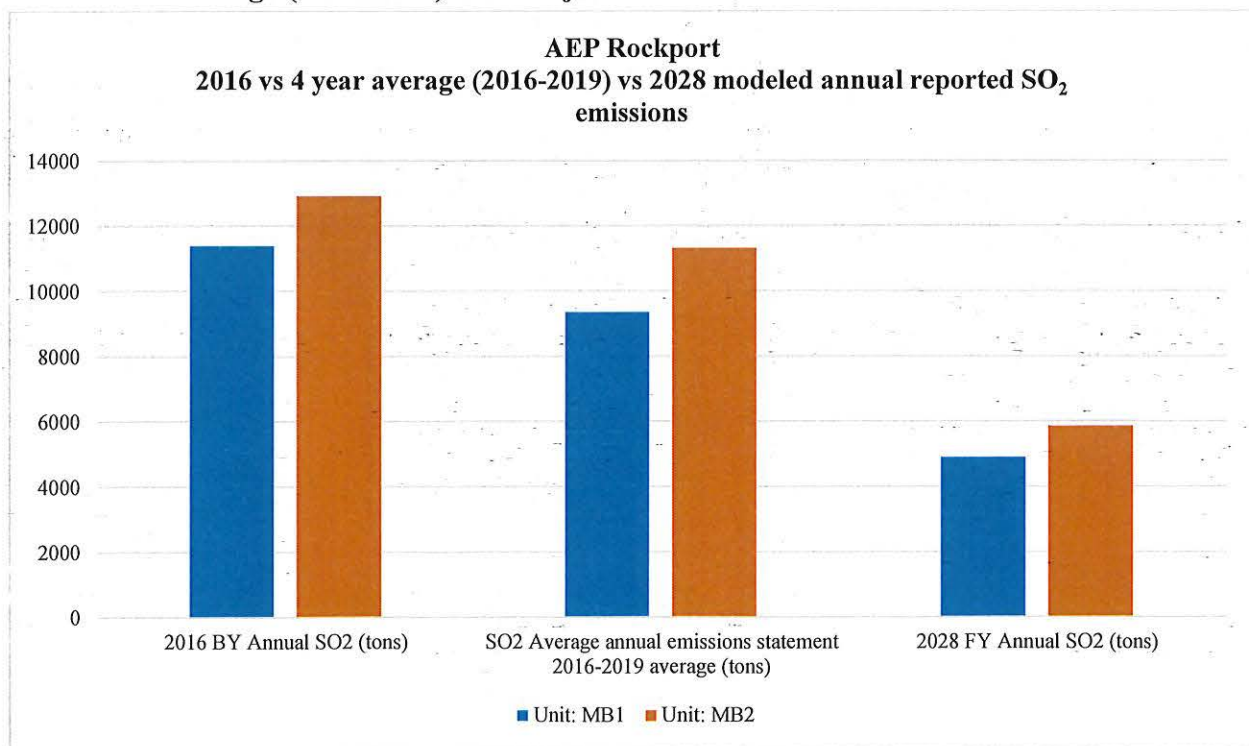
Rockport is required under a jointly modified consent decree signed on July 17, 2019, to install and continuously operate FGD systems, retire, refuel, or re-power Unit MB1 by December 31, 2025. This same requirement applies to Unit MB2 but by December 31, 2028. Rockport is also required to install advanced DSI by the same dates as listed above and operate a 30-day rolling average of 0.15 lb/MMBtu SO₂. Emissions are also required to be capped plant-wide in the agreement at 10,000 tons on an annual basis in between 2021 and 2028. Beginning in 2029 that plant wide total cap is lowered to 5,000 tons per year. In addition, Rockport was required to install and continuously operate a SCR on Unit MB1 by December 31, 2018, and Unit MB2 by June 1, 2020. AEP-Rockport met this requirement. This SCR shall maintain a 30-day rolling average NO_x emissions of 0.09 lb/MMBtu not later than the 13th calendar day of 2021. Both units at Rockport are included in the modeling for 2028.

Comparison of NO_x and SO₂ emissions by unit are shown below in Graphs 5-2 and 5-3 on the following page. The analysis demonstrates the continued downward trend of emissions from 2016 to projected emissions for 2028 with NO_x and SO₂ emissions decreases at both Units MB1 and MB2.

Graph 5-2 Unit Comparison of AEP Rockport's NO_x Emissions - Actual 2016 and 4-year Average (2016-2019) and Projected 2028



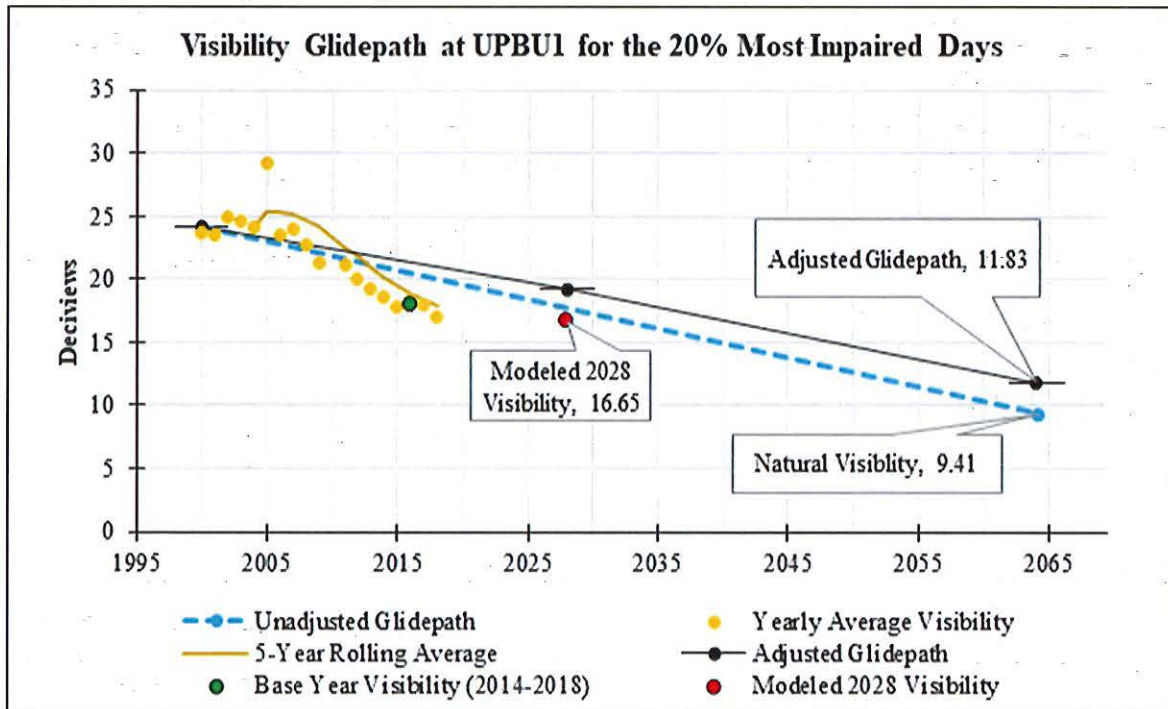
Graph 5-3 Unit Comparison of AEP Rockport's SO₂ Emissions – Actual 2016 and 4-year Average (2016-2019) and Projected 2028



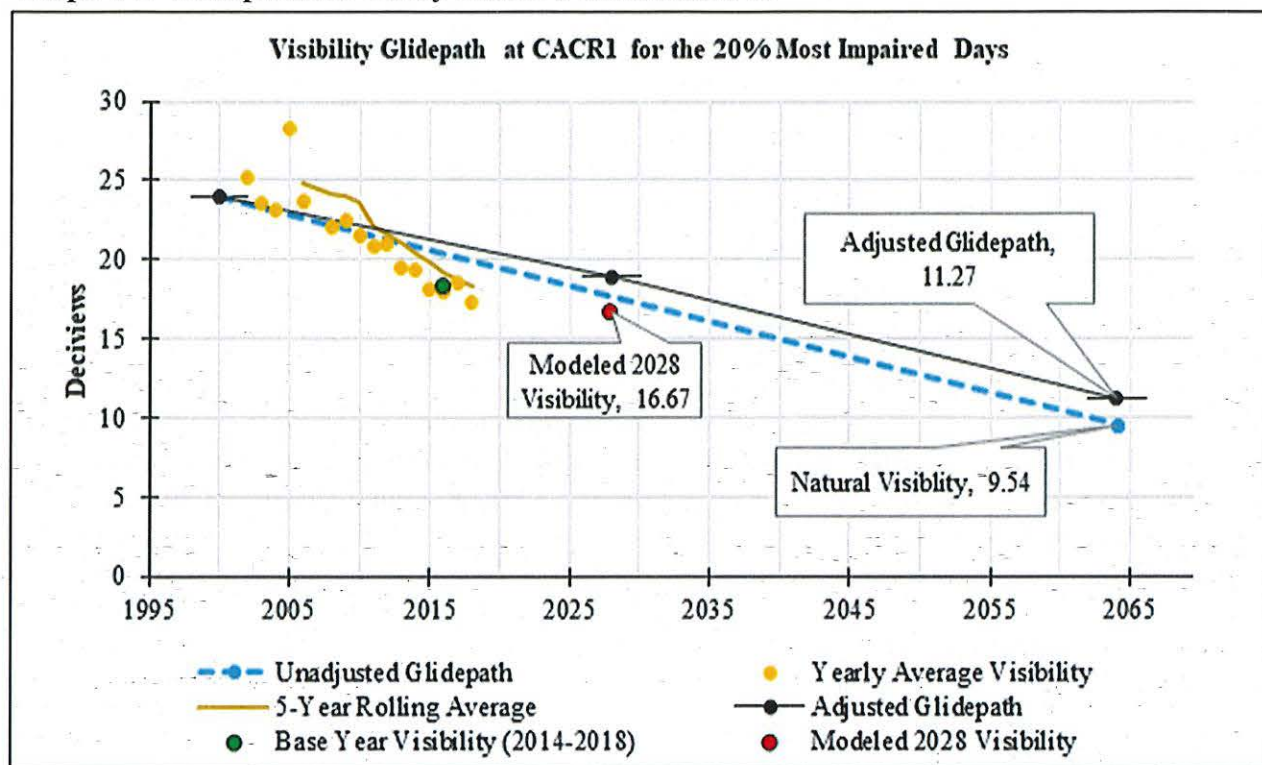
6.0 LADCO JUNE 2021 MODELING RESULTS

Indiana relied on LADCO to conduct photochemical modeling to determine visibility impacts, based on base-year 2016 emissions. Indiana included the Caney Creek Wilderness Area in its analysis as this is Arkansas' other Class I area within the state. The resulting glidepaths, shown below, include the IMPROVE monitoring data to determine visibility impacts on the 20% most anthropogenically impaired days. As can be seen, the IMPROVE monitoring data from 2014-2018 showed tremendous visibility progress at both Class I areas with visibility on the 20% most anthropogenically impaired days well below the glidepath and nearly equal to modeled 2028 visibility.

Graph 6-1 Glidepath for Upper Buffalo Wilderness Area



Graph 6-2 Glidepath for Caney Creek Wilderness Area



Results for both Class I areas analyzed show 2014-2018 baseline monitored values, as determined through the IMPROVE monitoring data, are lower than the modeled visibility impacts at both Arkansas Class I areas for 2028, based on the 2011 emissions and nearly equal the modeled results from the base-year 2016 future year 2028 modeling. Table 6-1 shows the marked improvement of visibility at Class I areas from both the monitored data from 2000 through 2018 and the modeling data from base-year 2011 to base-year 2016 with projected emissions to 2028. Undoubtedly, more current monitored visibility data will show even further visibility improvement.

Table 6-1 Comparison of Monitored and Modeled Visibility for Arkansas Class I Areas

Site	2000-2004 Monitored Baseline (dv)	2009-2013 Monitored Baseline (dv)	2014-2018 Monitored Baseline (dv)	2011 base - 2028 Modeled Results (dv)	2016 base - 2028 Modeled Results (dv)
Upper Buffalo	24.2	20.5	18.0	18.8	16.7
Caney Creek	24.0	21.1	18.3	19.5	16.7

The significance of the 2014-2018 monitoring period is the marking of the end of the first implementation period of the Regional Haze Rule with much-improved visibility progress at all Class I areas. This visibility improvement emphasizes the emission reductions that have occurred in Indiana and throughout the country. Emission reductions from 2011 to 2016 reduced the visibility impacts from previous visibility modeling analyses, thus showing continued

improvement in visibility at Class I areas over time. This fact is confirmed by the decrease in monitored visibility impairment at both Upper Buffalo and Caney Creek over the first implementation period. The emission reductions have realized monitored visibility benefits, and the reasonable progress goals are well ahead of future projections of visibility at the Class I areas for 2028. The steady decline of visibility impacts at the Class I areas from anthropogenic emissions over the past decade or more is significant and indicate that Indiana, as well as all other states, are taking the necessary steps to remain ahead of schedule in attaining natural visibility conditions at all Class I areas by 2064.

7.0 LADCO SOURCE APPORTIONMENT MODELING

LADCO conducted source apportionment modeling, completed in June of 2021, in which several Indiana emission sectors including all EGUs in Indiana and both of the identified Indiana EGU sources, Duke Energy - Gibson Generating Station and AEP - Rockport Generating Station tagged individually, were evaluated to determine their modeled visibility impacts. The visibility modeling results are shown below in Table 7-1 for both Class I areas in Arkansas, each Class I area's modeled 2028 total light extinction value based on 2016 emissions, Indiana EGUs overall visibility contribution to the total light extinction at each of the Class I areas, and the percentage of Indiana's EGUs visibility impact.

Table 7-1 All Indiana EGUs Visibility Impacts for Arkansas' Class I Areas

Class I Area	2016-2028 Total Light Extinction (Mm^{-1})	Indiana EGU Contribution to 2016-2028 Total Light Extinction (Mm^{-1})	Indiana EGU Contribution to 2016-2028 Total Light Extinction (%)
Upper Buffalo	54.4	0.715	1.3%
Caney Creek	54.4	0.43	0.8%

As mentioned, LADCO's source apportionment modeling looked at the individual impacts from Rockport and Gibson. In Table 7-2, modeled results show Rockport contributes below 0.4% to total light extinction at Upper Buffalo Wilderness Area and at 0.21% at Caney Creek. A more detailed look at the precursor pollutants showed Rockport's contribution to total sulfate visibility impacts were below 1% at Upper Buffalo Class I area and below 0.5% at Caney Creek.

Rockport's contribution to total nitrate visibility impacts were less than 0.2% at both Class I areas. Indiana believes a better representation of visibility impairments on the 20% most anthropogenically impaired days is to consider the total light extinction and compare with the source's combined emissions impact on visibility. Rockport's future year visibility contribution as a percent of total emissions is projected to be higher as a result of the number of coal unit retirements statewide between 2016 and 2028. In terms of total mass contribution from Rockport, emissions are lower in 2028 versus the base year. As stated previously, overall visibility modeling demonstrates RPGs are being met and the RPGs are well below the uniform rate of progress for all Class I areas of concern.

Table 7-2 Rockport Visibility Impacts for Selected VISTAS Class I Areas

Class I Area	Rockport	Total Nitrate	Rockport Nitrate	Rockport	Total Sulfate	Rockport Sulfate	Total Class I Light	Rockport
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	Nitrate Impact (Mm ⁻¹)	Impact (Mm ⁻¹)	Impact (%)	Sulfate Impact (Mm ⁻¹)	Impact (Mm ⁻¹)	Impact (%)	Extinction (Mm ⁻¹)	Total Impact (%)
UPBU	0.02	11.2	0.17%	0.19	19.9	0.96%	54.4	0.39%
CACR	0.01	8.31	0.17%	0.1	21.89	0.46%	54.4	0.21%

LADCO modeling shows that Duke Gibson contributes 0.22% to total light extinction at Upper Buffalo and 0.16% to total light extinction at Caney Creek Class I areas. While Duke Gibson's contribution to total sulfate visibility impacts were approximately 0.5% at Upper Buffalo and 0.35% at Caney Creek, its contribution to total nitrate impact was less than 0.2% at both Class I areas. Indiana considers a better representation of visibility impairments on the 20% most anthropogenically impaired days is to compare the total light extinction at the Class I areas with the source's combined NO_x and SO₂ emissions and its impact on total light extinction. Gibson's future year visibility contribution as a percent of total emissions is projected to be higher as a result of the number of coal unit retirements statewide between 2016 and 2028. In terms of total mass contribution from Gibson, emissions are lower in 2028 versus the base year.

Table 7-3 Gibson Visibility Impacts for Selected VISTAS Class I Areas

Class I Area	Gibson Nitrate Impact (Mm ⁻¹)	Total Nitrate Impact (Mm ⁻¹)	Gibson Nitrate Impact (%)	Gibson Sulfate Impact (Mm ⁻¹)	Total Sulfate Impact (Mm ⁻¹)	Gibson Sulfate Impact (%)	Total Class I Light Extinction (Mm ⁻¹)	Gibson Total Impact (%)
UPBU	0.01	11.20	0.15	0.11	19.93	0.53	54.4	0.22
CACR	0.01	8.31	0.12	0.08	21.89	0.35	54.4	0.16

In summary, the source apportionment modeling conducted by LADCO confirms the overall visibility improvement realized by both Class I areas in Arkansas as with all other Class I areas in the eastern half of the country. Contributions from Rockport and Gibson are small percentages of the overall visibility impairment, which based on current monitoring and modeling results, is decreasing each year and remains well below the uniform rate of progress. Further retirements of boilers and anticipated emission reductions throughout the country will continue to drive the visibility impairment lower at Arkansas' Class I areas and will realize continued improved visibility.

8.0 FEDERAL AND STATE REGULATIONS DISCUSSION

The primary Federal and state regulations governing the interstate transport of NO_x and SO₂ emissions from EGUs are described below.

8.1 Cross State Air Pollution Rule

EPA finalized the Cross State Air Pollution Rule (CSAPR) to reduce the interstate transport of fine PM and ozone on July 6, 2011, with publication in the Federal Register on August 8, 2011. The final rule replaces EPA's 2005 Clean Air Interstate Rule (CAIR) that was vacated by a December 2008 court decision that kept CAIR in place temporarily while directing EPA to issue a replacement rule. CSAPR requires 27 states, including Indiana, in

the eastern half of the United States to significantly improve air quality by reducing power plant emissions that cross state lines and contribute to ground-level ozone and fine particle (PM_{2.5}) pollution in other states.

CSAPR includes a process for determining each upwind state's responsibility to protect downwind air quality. Each time the National Ambient Air Quality Standard (NAAQS) is changed, U.S. EPA will apply this process and determine if interstate pollution transport contributes to exceedances of the new standard and whether new emission reductions should be required from upwind states. The rule defines what portion of an upwind state's emissions "significantly contribute" to ozone or PM_{2.5} pollution in nonattainment or maintenance areas in downwind states. This definition considers the magnitude of a state's contribution, the air quality benefits of reductions, and the cost of controlling pollution from various sources. Once these obligations are determined, the rule requires states to eliminate the portion of their emissions defined as their "significant contribution" by setting a pollution limit (or budget) for each covered state.

The rule allows air quality-assured allowance trading among covered sources, utilizing an allowance market infrastructure based on existing, successful allowance trading programs. CSAPR allows sources to trade emission allowances with other sources within the same program (for example, Transport Rule Ozone Season NO_x Trading Program) in the same or different states, while firmly constraining any emissions shifting that may occur by requiring a strict emission ceiling (state assurance level) in each state (the budget plus variability limit). It includes assurance provisions that ensure each state will make the emission reductions necessary to meet the "good neighbor" provision of the Clean Air Act.

CSAPR requires significant reductions in NO_x and SO₂ emissions that react in the atmosphere to form PM_{2.5} and ground-level ozone and are transported long distances. The first phase of compliance began January 1, 2012, for annual NO_x and SO₂ reductions and May 1, 2012, for ozone season NO_x reductions. The second phase of SO₂ reductions began January 1, 2014. Indiana is designated as a Group 1 state in CSAPR with additional SO₂ reductions in 2014.

The state of Indiana developed a state implementation plan to administer the three trading programs under CSAPR and allocate allowances for affected EGUs that started in 2021. The CSAPR Programs rulemaking revised Article 24 of the Indiana Administrative Code (IAC) to incorporate CSAPR requirements and repealed the remaining portions of CAIR. The final rule, 326 IAC 24, was adopted on November 24, 2017, and SIP approved and published in the Federal Register on December 17, 2018.

8.2 Revised Cross-State Air Pollution Rule Update

On October 15, 2020, EPA proposed the Revised Cross-State Air Pollution Rule Update in order to fully address 21 states' outstanding interstate pollution transport obligations for the 2008 ozone NAAQS. Starting in the 2021 ozone season, the proposed rule would require additional emission reductions of NO_x from power plants in 12 states. The proposed rulemaking responds to a September 2019 ruling by the United States Court of Appeals for

the D.C. Circuit, *Wisconsin v. EPA*, which remanded the 2016 CSAPR Update to EPA for failing to fully eliminate significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS from upwind states by downwind areas' attainment dates.

Indiana is one of the 12 linked states required to participate in a new CSAPR NO_x Ozone Season Group 3 Trading Program that largely replicates the existing CSAPR NO_x Ozone Season Group 2 Trading Program with additional budget stringency for affected states. Indiana's projected 2021 emissions were found to contribute at or above a threshold of 1% of the NAAQS (0.75 ppb) to the identified nonattainment and/or maintenance problems in downwind states. EPA proposes to issue new or amended Federal Implementation Plans (FIPs) to revise state emission budgets to reflect additional emission reductions from EGUs beginning with the 2021 ozone season. In order to respect attainment deadlines as directed by the court in *Wisconsin v. EPA*, EPA must revise the existing CSAPR NO_x ozone season program as quickly as possible to enable improvements in downwind ozone by the 2021 ozone season, which corresponds with the 2021 Serious area attainment date under the 2008 ozone NAAQS. This proposed action's FIPs would require power plants in the 12 linked states to participate in a new CSAPR NO_x Ozone Season Group 3 Trading Program that largely replicates the existing CSAPR NO_x Ozone Season Group 2 Trading Program, with the main differences being the geography and budget stringency. Aside from the removal of the 12 covered states from the current CSAPR NO_x Ozone Season Group 2 Trading Program, this proposal leaves unchanged the budget stringency and geography of the existing CSAPR NO_x Ozone Season Group 1 and Group 2 Trading Programs.

EPA also proposes to adjust these 12 states' emission budgets for each ozone season thereafter to incentivize ongoing operation of identified emission controls to address significant contribution, until such time that air quality projections demonstrate resolution of the downwind nonattainment and/or maintenance problems for the 2008 ozone NAAQS. As such, the proposal includes adjusting emission budgets for each state for each ozone season for 2021 through 2024. After the 2024 ozone season, no further adjustments would be required under this proposed rulemaking. EPA proposes to authorize a one-time conversion of allowances banked in 2017-2020 under the CSAPR NO_x Ozone Season Group 2 Trading Program into a limited number of allowances that can be used for compliance in the CSAPR NO_x Ozone Season Group 3 Trading Program. This approach gives due credit for the emission reductions represented by banked allowances, while also securing the additional reductions required in this proposed rulemaking. EPA solicited comments on the proposed rule and allowed 45 days for comment following publication.

9.0 SUMMARY OF INDIANA'S EGU ANALYSIS

Indiana surmises that its EGU sector was evaluated in great detail for the first implementation period of the Regional Haze Rule. Based on diverse industry-wide emission control measures mandated by strict regulations and far less reliance on coal over the past decade as more alternative power generation becomes available; numerous shutdowns and fuel conversions of boilers has occurred to which tens of thousands of tons of NO_x and SO₂ emissions have been reduced in just Indiana alone. Emission trends for both NO_x and SO₂ have shown dramatic

decreases in emissions with overall EGU NO_x emission decreases projected from 2011 to 2028 to be over 70%, and a nearly 90% decrease in SO₂ emissions. Additional retirements of EGUs are expected in addition to those listed herein.

Results for all Class I areas analyzed show 2014-2018 baseline monitored values, as determined through the IMPROVE monitoring data, are nearly equal and in some cases, lower than the modeled results from the base-year 2011 and base-year 2016 modeling. This emphasizes the emission reductions that have occurred in Indiana and throughout the country have realized monitored visibility benefits and the reasonable progress goals are well ahead of future projections of visibility at the Class I areas for 2028. PSAT results have shown that the two utilities identified by CENSARA have 1% or less visibility impacts on the CENSARA Class I areas located within 300 kilometers of the two utilities.

The steady decline of visibility impacts at the Class I areas from anthropogenic emissions over the past decade or more is significant. This indicates that Indiana, as well as all other states, are taking the necessary steps to remain ahead of schedule in attaining natural visibility conditions at all Class I areas by 2064.

The CSAPR Update proposes revised state emission budgets that reflect additional emission reductions from EGUs beginning with the 2021 ozone season to address projected 2021 emissions found to contribute at or above a threshold of 1% of the NAAQS (0.75 ppb) to the identified nonattainment and/or maintenance problems in downwind states. The proposed budget for 2021 NO_x Ozone Season was 23,303. The new budget is 12,500 with a 21% variability limit and EPA's projected emissions are 15,856.

As can be seen, emission reductions, monitoring data and modeling results clearly demonstrates improved visibility, especially in the eastern half of the county. Monitoring data indicated stark reductions in impaired visibility values, which are well ahead of the uniform rate of progress for the Class I area identified in the CENSARA request. The most current source apportionment modeling conducted by LADCO indicates Indiana's overall visibility impacts are declining. Anticipated further retirements of EGUs in the state will only continue to lower emissions and the state's visibility impacts on surrounding Class I areas. EPA's "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period, dated August 2019 states the "key flexibility of the regional haze program is that a state is not required to evaluate all sources of emissions in each implementation period". IDEM is intently evaluating other emission sectors for this second implementation period to determine their visibility impacts on Class I areas. IDEM will conduct a review of all its emission sources, with focus on the EGU sector, for its January 31, 2025, progress report: pursuant to 40 CFR 51.308 (g). IDEM will evaluate EGUs for the third implementation period of the RH Rule, as necessary, to be submitted in 2028. As a result, IDEM is not requiring 4-factor analyses from its EGUs nor will it conduct a 4-factor analysis on this emission sector for this second implementation period.

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APPENDIX D-5

Response to Comments Received By Federal Land Managers and Affected States

Division of Environmental Quality

Office of Air Quality

Introduction

On March 1, 2021, the Division of Environmental Quality (DEQ) sent letters to federal land managers (FLM) and affected states notifying these relevant agencies of the availability of pre-proposal consultation drafts of the Arkansas Regional Haze Planning Period II SIP revision. The notice was intended to provide each agency with the opportunity for a sixty-day consultation period on the SIP revision in accordance with 40 CFR § 51.308. DEQ requested that any comments be submitted to DEQ for consideration by no later than April 30, 2021.

DEQ received comments from the Texas Commission on Environmental Quality (TCEQ) and the United States Forest Service (USFS). The comments received are summarized and a response for each is given below.

TCEQ Comment 1: AEP Pirkey and Welsh Plants in Texas

TCEQ noted that emissions from American Electric Power's Pirkey and Welsh Plants in Texas were removed in DEQ's "Appendix L: Estimation of Visibility Benefits of Planning Period II Long-Term Strategy." TCEQ states that the announced retirements of those plants have not been made enforceable through actions by the company to void the operating permits at either plant. TCEQ notes that the agency did not include emission reductions from either plant as part of its Regional Haze SIP proposal and does not anticipate incorporating these planned retirements as an enforceable measure in the adopted SIP revision.

DEQ Response to TCEQ Comment 1:

DEQ included the planned retirements by Pirkey and Welsh plants in the pre-proposal consultation draft SIP because these retirements were announced as part of a plan to comply with federal law. The United States Environmental Protection Agency had not yet acted on these plans as of 5/3/2021. Therefore, DEQ did not include emissions reductions anticipated from retirement of these two facilities in DEQ's 2028 model inventory (revised "Appendix L: Additional Modeling and Technical Support Documentation"). DEQ is not including the "Estimation of Visibility Benefits of Planning Period II spreadsheet in the public notice draft of the Planning Period II SIP revision.

TCEQ Comment 2: Source Selection Methodology

TCEQ recommended that DEQ consider updating its source selection analysis to use a more recent inventory than the 2016 emission inventory or to use a projected 2028 base case inventory. TCEQ states that the 2016 Area of Influence (AOI) analysis developed by Ramboll for the CenSARA states is based on the 2011 National Emissions Inventory (NEI). TCEQ further states that point source emissions have changed greatly since 2011. TCEQ states that it used 2016 for screening sources for four-factor analysis and a base year for future year projections. TCEQ asserts that EPA's 2019 guidance indicates that projections for the end of the second planning period, 2028, should be used for selected sources for the four factor analysis.

DEQ Response to TCEQ Comment 2:

DEQ disagrees with TCEQ's recommendation for changing its source selection methodology.

First, the 2016 emissions inventory developed by Ramboll for use in the AOI analysis updates emissions from point sources based on data available at the time the analysis was performed. The 2011 modeling platform was used for projecting the inventory for the 2028 future year inventory, not the 2016 inventory. The 2016 inventory was updated with facility-specific emissions based on the 2016 NEI version alpha. The emissions database was provided to the CenSARA states for review and feedback from the states was used to further update the inventory. See Appendix B to the proposed Arkansas SIP revision. 2016 was the most current inventory year at the time the AOI analysis was performed. It is also the base year used in EPA's regional haze modeling.

Second, DEQ disagrees with TCEQ's assertion that 2028 future year projections should be used for selecting sources for four-factor analysis. In fact, EPA's guidance suggests that source selection can be based on forecasts of 2028 actual emissions or on actual source emissions in a historical period. Because EPA indicated that its preference was for states to use projected 2028 actual emissions for source selection, DEQ first considered using the 2028 AOI analysis results when it developed its source selection methodology. As part of consultation among the CenSARA calls, in which TCEQ participated, we heard feedback from other states regarding flaws in the 2028 inventory used for the 2028 AOI analysis. Specifically, the Integrated Planning Model (IPM) was used to project future year emissions from power plants. That model predicts economic conditions during the planning horizon and shuts down or switches coal-fired power plants to natural gas if the model identifies this as more cost-effective even if there is no plan by the utility to take such an action. This flaw in the dataset distorts the relative contribution of each source to the entire inventory (which is the metric DEQ used to select sources). EPA Region 6 echoed this concern and some of the federal land managers suggested that using DEQ's methodology with a historic inventory might be better than using the 2028 projected inventory. Based on this information and these conversations, DEQ reconsidered its use of the 2028 AOI analysis results and instead used the 2016 AOI analysis results, which was the most recent comprehensive analysis at the time DEQ selected sources.

FS Comment 1: Average vs. Maximum Monthly Emissions

The FS requests that DEQ add a discussion of the seasonality of the maximum monthly emission rate and whether there is any correlation to the twenty percent most impaired days.

DEQ Response to FS Comment 1:

Due to the nature of operations of sources included in Arkansas's SIP, this comparison does not yield meaningful results. Because pound-per-hour emissions values are often higher during start-up and shut down, a unit may not operate for a majority of the timeframe that is being analyzed, but it is likely that monthly emissions for that unit would be low while the pound-per-hour rate

was high. However, to explore the question raised by this comment, DEQ examined emission rates for selected Arkansas sources and found no correlation on the twenty percent most impaired days at Class I Areas. As an example, see DEQ's analysis for Wichita Mountains in Table 1.

Table 1: Correlation Between Maximum Monthly Emissions for Domtar Ashdown Mill and Wichita Mountains' Most Impaired Days

		Wichita Mountains	Domtar (Units PB2 and PB3 at Ashdown Mill)						
Month	Year	# of Impairment Group 90 Obs	PB2 SO2 (lb/hr)	PB2 NOx (lb/hr)	PB3 SO2 (lb/hr)	PB3 NOx (lb/hr)	Sum PB2 and 3 SO2 (lb/hr)	Sum PB2&3 NOx (lb/hr)	Sum PB2&3 NOx & SO2 (lb/hr)
January	2017	0	250.63	140.55	3.48	29.16	254.11	169.71	423.82
February	2017	2	223.92	137.77	3.91	52.95	227.83	190.72	418.55
March	2017	3	134.35	144.11	2.13	52.67	136.48	196.78	333.26
April	2017	0	195.53	115.88	2.64	62.47	198.17	178.35	376.52
May	2017	3	205.25	109.55	7.59	62.23	212.84	171.78	384.62
June	2017	2	205.22	115.08	4.05	34.93	209.27	150.01	359.28
July	2017	1	206.03	119.5	4.2	40.8	210.23	160.3	370.53
August	2017	1	212.67	119.01	0	94.55	212.67	213.56	426.23
September	2017	3	141.45	70.03	0	62.59	141.45	132.62	274.07
October	2017	0	237.61	120.02	0.02	72.65	237.63	192.67	430.3
November	2017	1	256.48	137.02	3.18	84.94	259.66	221.96	481.62
December	2017	3	273.59	157.98	3.3	53.9	276.89	211.88	488.77
January	2018	1	250.54	176.73	0.42	97.83	250.96	274.56	525.52
February	2018	3	230.75	116.55	7.95	75.69	238.7	192.24	430.94
March	2018	4	212.36	134.12	5.09	98.05	217.45	232.17	449.62
April	2018	2	198.91	124.97	6.86	70.03	205.77	195	400.77
May	2018	1	170.94	130.47	2.37	84.95	173.31	215.42	388.73
June	2018	0	109.46	121.14	12.09	56.92	121.55	178.06	299.61
July	2018	0	141.34	120.87	7.41	66.46	148.75	187.33	336.08
August	2018	1	123.15	97.88	4.4	70.82	127.55	168.7	296.25
September	2018	3	92.17	112.62	2.63	43.22	94.8	155.84	250.64
October	2018	0	166.26	105.23	0.89	47.66	167.15	152.89	320.04
November	2018	0	224.19	131.19	0	118.12	224.19	249.31	473.5
December	2018	4	213.2	129.29	0	71.45	213.2	200.74	413.94
January	2019	4	279.25	169.37	0	134.35	279.25	303.72	582.97
February	2019	4	270.93	152.22	5.26	78.7	276.19	230.92	507.11
March	2019	2	163.72	87.57	7.87	88.44	171.59	176.01	347.6
April	2019	1	173.68	99.47	4.54	52.61	178.22	152.08	330.3
May	2019	1	196.26	101.59	0.26	55.5	196.52	157.09	353.61

June	2019	2	221.19	127.82	1.27	40.01	222.46	167.83	390.29
July	2019	0	199.35	129.26	5.09	50.45	204.44	179.71	384.15
August	2019	2	183.45	148.24	0.03	38.04	183.48	186.28	369.76
September	2019	1	214.62	147.77	4.28	32.01	218.9	179.78	398.68
October	2019	0	187.33	145.76	4.07	46.32	191.4	192.08	383.48
November	2019	1	130.71	149.68	6.11	87.28	136.82	236.96	373.78
December	2019	1	169.52	155.33	11.06	75.41	180.58	230.74	411.32
Pearson's Correlation Coefficient between emissions rate and the number of most impaired days per month			0.20334	0.09826	-0.07994	0.20511	0.20160	0.19655	0.23204

Table 1 shows that there is little to no linear correlation between the most impaired days at Wichita Mountains and maximum monthly emission rates for Domtar Ashdown Mill.¹ While DEQ appreciates and has given consideration to this comment, DEQ disagrees that further discussion in the SIP is necessary.

FS Comment 2: Control Technology Determinations by Emission Unit Type

The FS suggests that DEQ make case-by-case comparisons of similar facilities instead of using thresholds based on summary statistics of costs incurred for controls by emission unit type. The FS points out that achieving the 2064 goals will become increasingly challenging as the program progresses and argues that DEQ's cost-effectiveness thresholds would be more appropriate as a floor than a ceiling. Furthermore, the FS notes that DEQ's methodology does not differentiate between cost of controls for SO₂ and NO_x. FS asserts that this makes DEQ's cost-effectiveness thresholds less relevant for emission control strategies evaluated for SO₂ or NO_x, but not both.

DEQ Response to FS Comment 2:

DEQ's use of thresholds to evaluate cost of compliance is reasonable and consistent with EPA guidance, which states that "when the cost/ton of a possible measure is within the range of the cost/ton values that have been incurred multiple times by sources of similar type to meet regional haze requirements or any other CAA requirement, this weighs in favor of concluding that the cost of compliance is not an obstacle to the measure being considered necessary to make reasonable progress."

¹ Correlation coefficients with values between 0.9 and 1.0 indicate variables that are very highly correlated; values between 0.7 and 0.9 indicate a high correlation; values between 0.5 and 0.7 indicate a moderate correlation; values between 0.3 and 0.5 indicate a low correlation; values less than 0.3 have little if any linear correlation.

The selection of different thresholds for different facility types is also reasonable because certain aspects of the four factors have different implications for different facilities. One such distinction is how the costs of compliance are financed and on whom those costs are imposed. For example, the cost of compliance for investor-owned EGUs in Arkansas, such as Flint Creek, is passed on to ratepayers by statute that allows the recovery of investments to comply with administrative rules or that related to the protection of the public health, safety, or the environment. In contrast, the costs of Industrial Boilers are borne by the company that owns that facility. Whether these costs can be absorbed by the facility owners or passed on to customers is a matter of the market for the goods or services the facility provides.

The statistical metric DEQ used to establish thresholds is also reasonable. DEQ used the 98th percentile metric based on costs of source-specific best available retrofit technology and reasonable progress determinations from planning period I to ensure that costs incurred multiple times by sources of a similar type were captured while potential outliers that may have only occurred once or twice were eliminated. If DEQ were to separate out further the cost data based on another criteria, such as SCC code, this would likely lower the cost-effectiveness threshold for different sources potentially eliminating additional controls as not cost-effective.

DEQ considered other approaches to establishing thresholds before deciding upon the metric included in the SIP. DEQ also examined categorizing sources of a similar type based on NAICS code instead of the broader categories DEQ ultimately included in the SIP or looking at the second highest cost incurred instead of using the 98th percentile metric. Both alternatives would have resulted in even lower thresholds than the metric ultimately established for the thresholds used in the SIP.

- For example, only two emission units (industrial boilers) belonged to a facility in the Iron Ore Mining NAICS category. The escalated cost-effectiveness of the planning period I control determination for those units was \$751.32/ton for both units. However, cost-effectiveness values for control determinations for industrial boilers in other NAICS categories ranged from \$427.82 – 3,732.41/ton with a 98th percentile value of \$3328/ton.
- For Kraft Pulp and Paper, the maximum cost-effectiveness was \$3,732.41/ton, with the second highest being \$1922.86/ton. If DEQ had chosen to compare Kraft Pulp and Paper Mills only to other Kraft Pulp and Paper Mills and eliminate outliers by selecting a metric based on the 2nd highest cost-effectiveness value, DEQ's metric would have been \$1922.86, not \$3328.

While DEQ agrees that achieving the 2064 goals may become increasingly challenging as the program progresses, DEQ disagrees that costs incurred during Planning Period I should be considered a floor and not a ceiling. The iterative nature of Regional Haze program planning allows states to consider the retirement and replacement of older industrial facilities by cleaner, more efficient facilities. In addition, the iterative planning process enables states to take

advantage of further innovations that drive down emissions of visibility impairing pollutants, lower the cost of control technologies, or create new control technologies that enable facilities to achieve even lower emissions rates. See 64 FR 35714 at 35732. Each iterative plan must provide for reasonable progress. This does not mean that cost-effectiveness metrics must necessarily increase each planning period if lower cost controls, retirement and replacement of older industrial facilities, and other innovations ensure continued progress in reducing visibility impairment.

DEQ disagrees with the FS assertion that DEQ's emission control thresholds are not relevant for controls that reduce emissions of SO₂ or NO_x, but not both. DEQ did not place greater weight on emission reductions of NO_x or SO₂. Therefore, a combined metric is reasonable. Furthermore, if DEQ were to further segregate the compilation of costs into SO₂ and NO_x-specific thresholds, this would result in lower cost-effectiveness thresholds and potentially eliminate additional controls as not cost-effective.

FS Comment 3: Domtar Ashdown Mill Controls

The FS believes that increased reagent use at the existing scrubbers for Domtar Ashdown Mill's No. 2 Power Boiler (SN-05) is a cost-effective strategy at \$3,590/ton. The FS compared No. 2 Power Boiler to a similarly sized Power Boiler GP Brunswick Cellulose, which installed controls with a cost-effectiveness of 3,732/ton. The FS suggests additional cost-effectiveness analysis focused on similar emission control strategies at similar facilities, rather than relying on summary statistics based upon broad source categories.

DEQ Response to FS Comment 3:

DEQ disagrees with FS suggestion that DEQ rely on a single determination for establishing whether an evaluated control is cost-effective. The use of statistics to select a metric that captures costs that have been incurred multiple times by similar source types is reasonable. Please see the DEQ Response to FS Comment 2 for additional information on the rationale behind the summary statistics DEQ used in establishing cost-effectiveness thresholds.

FS Comment 4: Flint Creek Controls

The FS believes that selective catalytic reduction (SCR) is a cost-effective emissions reduction strategy for Flint Creek. The FS suggests additional cost-effectiveness analysis focused on similar emission control strategies at similar facilities, rather than relying on summary statistics based upon broad source categories.

DEQ Response to FS Comment 4:

DEQ disagrees, as application of SCR at Flint Creek exceeds both DEQ's threshold and the maximum cost-effectiveness associated with a BART or reasonable progress determination for

EGU boilers. Please see DEQ Response to FS Comment 2 for additional information on the rationale behind the summary statistics DEQ used in establishing cost-effectiveness thresholds.

FS Comment 5: Future Fuel Controls

The FS strongly encourages DEQ to implement a one and one-half percent sulfur coal emission reduction strategy for Future Fuel's three coal-fired boilers. The FS notes that DEQ chose the most cost-effective control strategy of two percent, and that DEQ determined that the incremental cost-effectiveness between two percent sulfur coal and one and one-half percent sulfur content coal is above DEQ's threshold for industrial boilers.

DEQ Response to FS Comment 5:

For FutureFuel, two of three technically feasible low sulfur coal strategies were cost-effective when compared to the Industrial Boiler threshold. The most cost-effective option was switching to two percent sulfur content coal. The incremental cost-effectiveness between two percent sulfur content coal and one and one-half percent sulfur content coal (\$3,723/ton) was above the Industrial Boiler threshold. The incremental cost-effectiveness between two and one-half percent sulfur content coal and two percent sulfur content coal was \$1,449 and the incremental cost-effectiveness between two and one-half percent and one and one-half percent sulfur content coal was \$2,586. This analysis is in line with EPA guidance for considering incremental differences in cost and visibility benefits.² The incremental cost-effectiveness between two percent sulfur coal and one and one-half percent sulfur coal is above DEQ's threshold for Industrial Boilers. Therefore, DEQ concludes that it is reasonable to require fuel-switching from three percent sulfur coal to two percent sulfur coal to ensure reasonable progress during Planning Period II.

² Regional Haze Guidance, 2019, page 40: "Multiple control alternatives States may consider the incremental differences in cost and visibility benefits between the alternative control measures for a single source and may use an incremental version of the cost/ton and cost/inverse megameters metrics when doing so."