



**Kentucky Energy and Environment Cabinet**  
**Kentucky Division for Air Quality**

# **Appendix C**

# **Public Participation**

**KENTUCKY DIVISION FOR AIR QUALITY  
NOTICE OF PUBLIC HEARING ON A PROPOSED  
REVISION TO THE KENTUCKY STATE IMPLEMENTATION PLAN**

The Kentucky Energy and Environment Cabinet will conduct a public hearing on May 30, 2014, at 10:00 a.m. (Local Time) in Conference Room 201B at the Kentucky Division for Air Quality Central Office, 200 Fair Oaks Lane, 1<sup>st</sup> Floor, Frankfort, Kentucky, to receive comments on a proposed revision to Kentucky's State Implementation Plan (SIP). The proposed SIP revision includes a Pre-Hearing Draft of Kentucky's Regional Haze 5-Year Periodic Report for Kentucky's Class I Federal Area Mammoth Cave National Park. This SIP revision addresses the requirements of the Regional Haze Rule at 40 C.F.R. 51.308(g) requiring periodic reports that evaluate progress towards a State's Reasonable Progress Goals for visibility improvement in Class I federal areas.

This hearing is open to the public and all interested persons will be given the opportunity to present testimony. The hearing will be held, if requested, at the date, time, and place given above. It is not necessary that the hearing be held or attended in order for persons to comment on the proposed submittal to EPA. To assure that all comments are accurately recorded, the Division requests that oral comments presented at the hearing also be provided in written form, if possible. To be considered part of the hearing record, written comments must be received by the close of the hearing. Written comments should be sent to the contact person. If no request for a public hearing is received, the hearing will be cancelled, and notice of the cancellation will be posted at the website listed below. Request for a public hearing must be received no later than May 23, 2014, while all written comments must be submitted no later than May 30, 2014.

The full text of the proposed SIP revision is available for public inspection and copying during regular business hours (8:00 a.m. to 4:30 p.m.) at the locations listed below. Any individual requiring copies may submit a request to the Division for Air Quality in writing, by telephone, or by fax. Requests for copies should be directed to the contact person. In addition, an electronic version of the proposed SIP revision document and relevant attachments can be downloaded from the Division for Air Quality's web site at: <http://air.ky.gov/Pages/PublicNoticesandHearings.aspx>.

The hearing facility is accessible to people with disabilities. An interpreter or other auxiliary aid or service will be provided upon request. Please direct these requests to the contact person.

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## STATEMENT OF CONSIDERATION

**RELATING TO THE STATE IMPLEMENTATION PLAN (SIP) REVISION THAT ADDRESSES THE REQUIREMENTS OF THE REGIONAL HAZE RULE AT 40 C.F.R. 308(g) REQUIRING PERIODIC REPORTS THAT EVALUATE PROGRESS TOWARDS A STATE'S REASONABLE PROGRESS GOALS FOR VISIBILITY IMPROVEMENT IN CLASS I FEDERAL AREAS SUCH AS KENTUCKY'S MAMMOTH CAVE NATIONAL PARK AND CLASS I AREAS IN OTHER STATES.**

Amended After Comments

# Energy and Environment Cabinet

Department for Environmental Protection

Division for Air Quality

A public comment period was open to receive comments on the State Implementation Plan (SIP) revision to address the requirements of the Regional Haze Rule at 40 C.F.R. 51.308(g) requiring periodic reports that evaluate progress towards a State's Reasonable Progress Goals (RPGs) for visibility improvement in Class I federal areas such as Kentucky's Mammoth Cave National Park and Class I areas in other states. No request for a public hearing was received therefore a previously scheduled hearing was cancelled.

The following individuals from the Kentucky Energy and Environment Cabinet drafted responses to comments received during the public review period.

Martin Luther, Environmental Scientist II, Division for Air Quality

**Response to Comments for the proposed revision to the State Implementation Plan (SIP) to address the requirements of the Regional Haze Rule at 40 C.F.R. 51.308(g) requiring periodic reports that evaluate progress towards a State's RPGs for visibility improvement in Class I federal areas.**

*These responses are prefaced with the fact that based on recent 5-year average 2009-2013 IMPROVE monitoring data, which has been included in the Kentucky Regional Haze 5-Year Periodic Report, Mammoth Cave is meeting and exceeding its 2018 RPGs for the 20% worst days and 20% best days.*

- 1. Comment:** Section 1.1, Page 24: Please update Section 1.1 to acknowledge that the Supreme Court issued a ruling on April 29, 2014, regarding the Cross State Air Pollution Rule and the Clean Air Interstate Rule.  
*R. Scott Davis, U.S. EPA*

**Response:** The Cabinet acknowledges this comment and narrative has been added to address this comment.

2. **Comment:** Class I Federal Areas Affected: Consider modifying references to Class I Federal areas affected by Kentucky’s regional haze progress report SIP to include out of state areas. For example, the title of the document could be expanded in scope with such language as: “**Proposed Kentucky...Periodic Report 2008-2013 For Kentucky’s Class I Federal Area**”. Similar references explaining the scope of the report for elements which apply to Class I areas both within and outside a state affected by a state’s sources could also be modified (e.g., see last sentence on page 52).  
*R. Scott Davis, U.S. EPA*

**Response:** The Cabinet acknowledges this comment and narrative has been changed as appropriate.

3. **Comment:** Section 2.2, Page 38: Since the issuance of this prehearing package, additional actions by EPA have been taken which change some of the information in Section 2.2 regarding the 2010 sulfur dioxide (SO<sub>2</sub>) national ambient air quality standards (NAAQS). For completeness, please consider updating the relevant references in this section to reflect signature of EPA’s proposed Data Requirements Rule for the 1-Hour Sulfur Dioxide (SO<sub>2</sub>) Primary National Ambient Air Quality Standard (NAAQS) on April 17, 2014, and issuance of EPA Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions (dated April 23, 2014).  
*R. Scott Davis, U.S. EPA*

**Response:** The Cabinet acknowledges this comment and narrative has been added to address this comment.

4. **Comment:** III. A. *Account for the Supreme Court’s recent decision upholding the Cross State Air Pollution Rule (“CSAPR”), which calls into question continued reliance on the Clean Air Interstate Rule (“CAIR”) to achieve emissions reductions;*

Each progress report must include “a description of the status of implementation of all measures included in the implementation plan for achieving reasonable progress goals for mandatory Class I Federal areas both within and outside the State.” 40 C.F.R § 51.308(g)(1). While the Progress Report covers the wide range of measures included in the Kentucky haze SIP, it should be revised to account for significant changes in the legal status of CAIR.

Kentucky chose to rely on CAIR emissions allocations in lieu of developing and adopting source-specific BART requirements. The State developed the draft Progress Report prior to the United States Supreme Court’s recent decision upholding CSAPR against facial challenges to the validity of the rule. *EPA v. EME Homer City Generation, L.P.*, 572 U.S. \_\_\_ (2014). The Court’s decision calls into question the legality of Kentucky’s continued reliance on CAIR to satisfy the BART requirements. We expect that as a result of the Court’s ruling, the D.C. Circuit’s stay of the effectiveness of CSAPR will be lifted and CSAPR will go into effect at some point prior to the end of this first haze planning period in 2018. Regardless of when CSAPR becomes legally effective, it is no longer

appropriate for Kentucky to assume that CAIR emissions reductions will be implemented, and will be enforceable, for the remainder of the first planning period.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet has included narrative to acknowledge that the Supreme Court issued a ruling on April 29, 2014, regarding CSAPR. The ruling reversed the judgment of the United States Court of Appeals for the D.C. Circuit for CSAPR and remanded the cases for further proceedings consistent with the opinion. Therefore, CAIR remains in effect pursuant to the Supreme Court decision. However, the Cabinet disagrees that the recent CSAPR ruling calls into question Kentucky's reliance on CAIR since EPA previously ruled (77 FR 33642, June 7, 2012) that CSAPR like CAIR is also "Better than BART" for EGUs for NO<sub>x</sub> and SO<sub>2</sub>. Therefore, once CSAPR goes into effect it will continue the emission reductions related to CAIR and replace CAIR in Kentucky's Regional Haze SIP.

5. **Comment:** III. B. *Specify which emissions reductions have been achieved as a result of haze SIP control measures, as opposed to reductions achieved through other programs; Identify emissions reductions that are enforceable versus the reductions that are voluntary and can be reversed;*

40 C.F.R § 51.308(g)(2) requires each progress report to include a "summary of the emissions reductions achieved throughout the State through implementation of the measures described in paragraph (g)(1) of this section." While the draft Progress Report accounts for many of the emissions reductions achieved in Kentucky, it does not summarize the emissions reductions achieved through implementation of the measures contained in the Kentucky haze SIP, as required by 40 C.F.R § 51.308(g)(2). That is, the Progress Report does not distinguish between emissions reductions achieved as a result of the haze SIP versus emissions reductions achieved as a result of other enforceable requirements or voluntary measures.

The fundamental purpose of a progress report is to assess the efficacy of the haze SIP. It is difficult to render such an accounting if the State does not attempt to determine the emissions reductions required specifically by the haze SIP rather than by other programs. Accordingly, we urge the State to revise the draft Progress Report to quantify the emissions reductions achieved specifically as a result of the regional haze SIP. For example, if a company has announced plans to switch fuels at, or retire, a unit, but the fuel switching or retirement is not required by and made enforceable by the regional haze SIP, then the anticipated emissions reductions should not be counted as reductions achieved through implementation of the haze SIP.

Relatedly, the draft Progress Report does not indicate whether such anticipated fuel switching or retirements are enforceable, which makes the expected emissions reductions uncertain. The final Progress Report should note which emissions reductions are not legally enforceable and account for the corresponding uncertainty in the anticipated emissions reductions.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet does not agree. The Cabinet has included in the periodic report information on EGU announced retirements and fuel switching which have been made public and are needed for compliance with EPA’s MATS rule. The MATS rule, like CAIR, is one of the federal control measures listed in the periodic report that is an important part of Kentucky’s Regional Haze SIP. In addition, in the 2018 Kentucky Regional Haze SIP, the Cabinet will provide an update on the EGU retirements and fuel switching that did occur and the associated emission reductions.

6. **Comment:** III. B. *Assess emissions reductions achieved through implementation of NOx controls;*

Finally, the draft Progress Report summarizes only the reduction in SO<sub>2</sub> emissions. There is no summary of NO<sub>x</sub> emissions reductions achieved through SIP-related measures. While sulfate is the pollutant most responsible for visibility impairment in Mammoth Cave National Park and the Class I area surrounding Kentucky, NO<sub>x</sub> emissions are also a significant contributor to visibility impairment. Moreover, as SO<sub>2</sub> emissions have declined, there has been a “significant decrease in the sulfate contribution to visibility impairment,” and a simultaneous increase in the contribution of nitrates to visibility impairment. Progress Report at 78. The nitrate contribution has increased both as a percentage of overall visibility improvement, and also on its own as a measure of light extinction, not relative to other values. Review of IMPROVE data. This underscores the importance of ensuring that the State does not ignore opportunities to track, and reduce, NO<sub>x</sub> emissions that cause visible air pollution.

In addition to the policy reasons for taking stock of the NO<sub>x</sub> emissions reductions achieved through the Kentucky haze SIP, such accounting is required by EPA’s regulations. 40 C.F.R § 51.308(g)(2) requires each progress report to include a summary of “emissions reductions”—not just SO<sub>2</sub> emissions reductions—achieved through implementation of measures in the haze SIP. To comply with this regulatory provision and provide a more complete accounting of how the haze SIP is being implemented, the final Progress Report should add a summary of the reductions in NO<sub>x</sub> emissions.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet does not agree. While the current Kentucky Regional Haze SIP and periodic report is focused on accounting for SO<sub>2</sub> emission reductions from EGUs, the report does provide in Figures 10 and 12, respectively, 2002-2012 CAMD EGU NO<sub>x</sub> emissions for Kentucky and VISTAS states. In addition, the Cabinet as part of its development of its 2018 Kentucky Regional Haze SIP will reevaluate all visibility-impairing pollutants, including NO<sub>x</sub>, as needed to ensure that Kentucky remains on track to continue meeting its RPGs.

7. **Comment:** III. C. A close analysis of the relative and absolute contributions from individual visibility-impairing pollutants can indicate important trends, as noted in EPA’s April 2013 Guidance. Kentucky has included a limited version of this type of data in Section 6. Progress Report at 76-79.5 We believe this information is particularly useful for Kentucky and surrounding states, where the relative contribution of pollutants has

changed and is likely to continue to change. We request that the state include additional information on the trends in visibility components, either in this section or in Section 6. In line with the requirement to provide the most current visibility data, we urge Kentucky to include the most current data, from 2008 to 2012, in its discussion of pollutant contributions.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet has added and updated several charts in Section 6 that includes more current IMPROVE monitoring data (2009-2013) for Mammoth Cave. As part of the development of the Kentucky 2018 Regional Haze SIP many more charts will be developed to determine and examine the latest changes in the relative contribution of pollutants for Mammoth Cave and surrounding Class I areas.

8. **Comment:** III. D. 40 C.F.R § 51.308(g)(4) requires, among other things, an analysis covering the most current 5-year period “based on the most recent updated emissions inventory, with estimates projected forward as necessary and appropriate.” Kentucky has included inventories for 2002 and 2007 along with future projections for 2009 and 2018. While these may be the most updated inventories and future projections, we ask that Kentucky include, where available, the most up-to-date information for individual sectors. In particular, we note that EPA’s Clean Air Markets Database provides emissions data for electric generating units, typically available through the most recent quarter. In addition, some information should be available through state emissions inventory and Title V reporting, or sources like EPA’s 2011 National Emissions Inventory. Even if these sources do not provide a complete inventory across all sectors for more recent years, they would provide valuable additional information. Without this information it is more difficult to determine the impact of the State’s SIP measures.

For example, the below figure demonstrates the NO<sub>x</sub> and SO<sub>2</sub> emissions from Kentucky sources reported to the Clean Air Markets Database from 2000-2013. There have been significant decreases in emissions, particularly SO<sub>2</sub>, but NO<sub>x</sub> emissions from these sources have not decreased in 5 years. This type of information would be valuable in evaluating whether or not Kentucky’s current plan is sufficient. It also reinforces the need to include information about which controls are already in place at specific sources and which future controls are enforceable (and thus, what future reductions can be relied on).

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet does not agree. The periodic report already provides, in Figures 10 and 12, 2002-2012 EPA’s Clean Air Markets (CAMD) EGU SO<sub>2</sub> and NO<sub>x</sub> emissions for Kentucky and for VISTAS states. In addition, the periodic report also provides similar years of CAMD EGU SO<sub>2</sub> emissions data and/or emission reductions for Kentucky sources in a number of other tables and figures throughout the periodic report (e.g., Tables 11, 13, 14 and Figures 11 and 13). This information was utilized by the Cabinet to determine that Kentucky’s Regional Haze SIP is sufficient for Mammoth Cave to continue meeting and exceeding its 2018 RPGs and not to impede other Class I areas from meeting their RPGs. In addition, as part of the development of the Kentucky 2018 Regional Haze SIP, new emissions inventories will be developed for base and future year SIP modeling.

9. **Comment:** *And specify changes in emissions from sources outside Kentucky.*

III. E. 40 C.F.R § 51.308(g)(5) obligates each progress report to include an “assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred over the past 5 years that have limited or impeded progress in reducing pollutant emissions and improving visibility.” The State addressed this requirement by noting that there “does not appear to be any significant change in anthropogenic emissions *within* Kentucky” that would impede progress. Progress Report at 76 (emphasis added). But 40 C.F.R § 51.308(g)(5) expressly requires an assessment of significant changes in anthropogenic emissions “within or outside the State.” In order to comply with this provision, the final Progress Report should add a discussion of whether there are changes in anthropogenic emissions outside of Kentucky that have impeded progress in improving visibility at Mammoth Cave and/or other Class I areas.

For example, it is our understanding that the two units at the Rockport plant in Indiana will not receive scrubbers until 2025 and 2028, whereas they were previously slated to receive scrubbers in 2017 and 2019. The units are located close to Mammoth Cave National Park, so delaying the installation and operation of scrubbers means that anticipated SO<sub>2</sub> emissions reductions will not occur for some time and instead the units will continue to impair visibility in Mammoth Cave. The final report should include a discussion of changes in emissions outside of Kentucky precisely in order to account for these kinds of changes that may impede progress in improving visibility at Mammoth Cave.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet does not agree. Based on recent 2009-2013 IMPROVE monitoring data, which has been included in the Kentucky Regional Haze Periodic Report, Kentucky is meeting and exceeding its 2018 RPGs for both the 20% worst and 20% best days for Mammoth Cave. The periodic report does provide information on other sources outside of Kentucky that pursuant to the June 2008 Kentucky Regional Haze SIP were identified as having a 1% or greater impact on Mammoth Cave and the status of possible emission controls. The Cabinet as part of its 2018 Kentucky Regional Haze SIP will provide updated information on the emission controls for applicable sources in neighboring states that are impacting Mammoth Cave. In addition, the Cabinet has added language to the periodic report to address changes to anthropogenic emissions outside of Kentucky that have impeded progress in improving visibility at Mammoth Cave and/or other Class I areas.

10. **Comment:** III. F. 40 C.F.R § 51.308(g)(6) mandates an “assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Federal Class I areas affected by emissions from the State, to meet all established reasonable progress goals.” The Progress Report indicates that the 2018 reasonable progress goal for the 20% best days has already been achieved. Progress Report at 66-68, 80. However, the 2018 reasonable progress goal for the 20% worst days has not yet been achieved. The State will need to make additional gains between now and



2018 in order to meet the reasonable progress goal for the 20% worst days at Mammoth Cave National Park.

*Matthew Gerhart, Earthjustice*

**Response:** Based on recent 2009-2013 IMPROVE monitoring data, which has been included in the Kentucky Regional Haze Periodic Report, Kentucky is meeting and exceeding its 2018 RPGs for both the 20% worst and 20% best days for Mammoth Cave. However, the Cabinet as part of its development of the 2018 Kentucky Regional Haze SIP will evaluate other sources as needed for possible reasonable progress controls to make sure that Kentucky remains on track to continue meeting its RPGs.

11. **Comment:** III. F. Section 7 of the Progress Report purports to show that various out-of-state Class I areas are on track to achieve their respective reasonable progress goals by 2018. However, the State attempts to demonstrate this through graphs titled “Uniform Rate of Reasonable Progress Glide Path” that plot the glide path against observed visibility conditions.

The discussion in this section of the draft Progress Report is confusing for several reasons. First, as the State is well aware, the uniform rate of progress (“URP”) and the reasonable progress goals are distinct concepts. The uniform rate of progress represents the straight line between baseline visibility conditions and natural visibility conditions; the reasonable progress goal can be equal to the URP or it can be more or less stringent, depending on a state’s analysis for a given Class I area. It is unclear what the State means by “Uniform Rate of Reasonable Progress Glide Path.”

Second, the draft Progress Report does not explain why the graphs appear to plot the URP when the regulatory provision in question requires showing that plan measures are sufficient to meet the reasonable progress goals—not the URP. We would expect the graphs to plot the progress in achieving the reasonable progress goals, not the URP, for each Class I area, although some discussion of the URP is also helpful for reference.

To resolve this confusion, we recommend that the final Progress Report include a discussion of whether the haze SIP control strategies are sufficient to meet the reasonable progress goals at the Class I areas surrounding Kentucky. We also recommend that Kentucky include the visibility values relied on in a table form, as is done earlier in the Progress Report for Mammoth Cave, as the given charts are difficult to read and it is not clear what points are labeled.

*Matthew Gerhart, Earthjustice*

**Response:** Pursuant to your recommendation, the Cabinet has included more current 2009-2013 visibility values in tabular form in Section 7 for the surrounding state Class I areas which indicates that these Class I areas are either meeting or on track to meet their 2018 RPGs goals. This information provides evidence that the Kentucky Regional Haze SIP control strategies, in addition to Mammoth Cave, are sufficient for surrounding Class I areas to meet their RPGs.

12. **Comment:** III. F. Finally, we note that Kentucky is only “on track” to meet these goals at Mammoth Cave and out of state Class I areas to the extent that its emissions continue to be enforceably reduced from now until 2018. If additional reductions are not achieved, or if existing non-enforceable reductions are lost (that is, if emissions reductions are reversed), the goals will not be met. *Matthew Gerhart, Earthjustice*

**Response:** Based on recent 2013 IMPROVE monitoring data, which has been included in the Kentucky Regional Haze Periodic Report, Kentucky is meeting its 2018 RPGs for both the 20% worst and 20% best days for Mammoth Cave. However, the Cabinet as part of its development of the 2018 Kentucky Regional Haze SIP will evaluate other sources as needed for possible reasonable progress controls to make sure that Kentucky remains on track to continue meeting its RPGs.

13. **Comment:** III. G. 40 C.F.R § 51.308(g)(7) requires each progress report to include a “review of the State’s visibility monitoring strategy and any modifications to the strategy as necessary.” As the State notes, there is an IMPROVE monitor at Mammoth Cave National Park. Progress Report at 86. We agree with the State that it is critical to maintain funding for this monitoring, as it provides the most accurate, long-term data for tracking trends in visibility conditions. The State correctly notes that “it is difficult to imagine how the objectives [of the regional haze program] listed above could be met without the monitoring provided through IMPROVE.” *Id.* For this reason, we join the State in urging EPA to maintain, and if possible to increase, funding for the IMPROVE monitoring network.

*Matthew Gerhart, Earthjustice*

**Response:** The Cabinet acknowledges this comment.

14. **Comment:** IV. Point Sources to Evaluate in the Next Haze SIP Revision

Furthermore, the State has long recognized that a small number of point sources, primarily electric generating units (“EGUs”), are responsible for the majority of the air pollution that causes visibility impairment in Mammoth Cave National Park and surrounding Class I areas. Despite this finding, the State declined to perform full best available retrofit technology (“BART”) analyses for sulfur dioxide (“SO<sub>2</sub>”) and NO<sub>x</sub> for any EGUs, because the State relied on CAIR. The State should use this report to identify sources for which additional pollution controls may be necessary and legally required. Toward that end, we have calculated emissions to distance, or Q/D, ratios for several EGUs: Coleman, Elmer Smith, E.W. Brown, R.D. Green, Shawnee, and Wilson. The State should evaluate BART or reasonable progress controls for these facilities as part of a SIP revision that flows from Kentucky’s progress report review, or, at a minimum, the State should prioritize these facilities in the 2018 SIP revision.

Throughout the development and review of the regional haze SIP, the State has acknowledged that a handful of point sources, primarily EGUs, are responsible for the bulk of the air pollution that causes visibility impairment in Mammoth Cave and surrounding Class I areas. *E.g.*, Progress Report at 8, 15. Nonetheless, the State declined to perform full BART analyses for SO<sub>2</sub> and NO<sub>x</sub> for any EGUs because of the State’s

reliance on CAIR. 76 Fed. Reg. at 78,208 n. 14. This approach was illegal from the beginning, but the Supreme Court's recent decision upholding the facial validity of CSAPR confirms that CAIR will not be able to supply the enforceable emissions reductions needed to satisfy the regional haze requirements.

Given that the CAIR allocations will not be able to satisfy the BART requirements, the haze SIP will lack the enforceable limits required by the Clean Air Act. Once CAIR is replaced by CSAPR, there will be no doubt that the State's haze SIP contains no enforceable requirements capable of satisfying the statutory mandate to require BART. The State should use this review of its haze SIP to conduct the five-factor BART analyses for SO<sub>2</sub>, NO<sub>x</sub>, and PM it should have conducted in the first haze SIP, rather than waiting to do so. At a minimum, the State should use this review as an opportunity to identify sources that will be evaluated for reasonable progress controls in 2018. Ultimately, the EGUs examined below should be controlled under the regional haze program because they contribute significantly to the visibility impairment the haze program is designed to eliminate. Regardless of whether the State imposes BART or reasonable progress controls on these units, it is critical that the State establish the pollution limits for these facilities necessary to make reasonable progress toward the statutory goal of achieving natural visibility conditions.

As a preliminary step in identifying the potential need for controls at Kentucky facilities, we have calculated the emissions to distance ratio, or Q/d ratio, for EGUs in Kentucky,<sup>7</sup> at the nearest Class I area as well as the cumulative Q/d for all Class I areas within 300 km and 500 km of each EGU. The larger the Q/d ratio, the greater the potential for visibility impairment. In general, a Q/d equal to or greater than 10 indicates that a source causes or contributes to visibility impairment and dispersion modeling should be conducted. *See* 76 Fed. Reg. 58,570, 58,624, 58,624 n.83 (Sept. 21, 2011). While a Q/d ratio is no substitute for the visibility modeling that is a part of a proper visibility impact and pollution control analysis, Q/d ratios can serve as rough guides in identifying facilities for which additional pollution reductions are necessary. These ratios are sometimes discussed per pollutant (Q/d for SO<sub>2</sub>) or for a combination of pollutants (Q/d for NO<sub>x</sub> + SO<sub>2</sub>).

The tables below list the nearest Class I area, 2013 emissions,<sup>8</sup> and Q/d ratios for EGUs in Kentucky. Q/d values greater than 10 are highlighted. As would be expected, for most of the EGUs listed below, Mammoth Cave National Park is the nearest Class I area, and many have a very high Q/d value for Mammoth Cave, suggesting that significant visibility gains at Kentucky's only Class I area can be achieved by further reducing emissions from these EGUs. Q/d values for most of the facilities, including Coleman, Elmer Smith, R.D. Green, Brown, Wilson, and Shawnee, are above 10 for both SO<sub>2</sub> and NO<sub>x</sub> at the nearest Class I area, indicating the potential need for additional reductions in SO<sub>2</sub> and NO<sub>x</sub> from these facilities.

Moreover, we have done a rough analysis of the potential post-MATS emissions and Q/d for these facilities.<sup>9</sup> Although the values decrease in many cases, the Q/d is still above 10 for many units at the nearest Class I area and cumulatively at the Class I areas within 300 and 500 km. In other words, unless these units are emitting at levels well below what is

required under MATS, potential impacts will remain and need to be addressed. The State should evaluate opportunities to encourage the greatest possible reductions now while facilities may be considering their options for installing new controls, upgrading existing controls, or retiring.

Finally, the next haze SIP should evaluate the potential to reduce NO<sub>x</sub> emissions from these EGUs given that many do not have post-combustion NO<sub>x</sub> controls (only low-NO<sub>x</sub> burners). Requiring the installation and operation of SCRs would dramatically reduce NO<sub>x</sub> emissions and improve visibility. With respect to SO<sub>2</sub> controls, TVA intends to install scrubbers only on Shawnee units 1 and 4. Requiring more stringent SO<sub>2</sub> controls such as scrubbers at all of Shawnee's units has the potential to significantly improve visibility at Mammoth Cave and surrounding Class I areas. Additionally, the State should evaluate opportunities to reduce SO<sub>2</sub> emissions rates even at facilities with scrubbers, by, for example, improving the performance of existing scrubbers.

*Matthew Gerhart, Earthjustice*

**Response:** The Supreme Court's ruling reversed the judgment of the United States Court of Appeals for the D.C. Circuit for CSAPR and remanded the cases for further proceedings consistent with the opinion. Therefore, CAIR remains in effect pursuant to the Supreme Court decision. However, the Cabinet disagrees that the recent CSAPR ruling calls into question Kentucky's reliance on CAIR since EPA previously ruled (77 FR 33642, June 7, 2012) that CSAPR like CAIR is also "Better than BART" for EGUs for NO<sub>x</sub> and SO<sub>2</sub>. Therefore, once CSAPR goes into effect it will continue the emission reductions related to CAIR and replace CAIR in Kentucky's Regional Haze SIP. However, the Cabinet as part of its development of the 2018 Kentucky Regional Haze SIP will evaluate other applicable sources and other visibility impairing pollutants as needed for possible reasonable progress controls to make sure that Kentucky remains on track to continue meeting its RPGs.