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December 2, 2011

U.S. Environmental Protection Agency
Air and Radiation Docket, Mailcode 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attention: Docket ID No. EPA–HQ–OAR–2010–1059
Re: *Federal Register* Vol. 76, No. 61098, Guidance for 1-hour SO_2 NAAQS SIP Submissions

On behalf of the Commonwealth of Kentucky, the Division for Air Quality (Division) respectfully submits the following comments in response to the October 3, 2011 *Federal Register* notice soliciting comments on the "Guidance for 1-Hour SO_2 NAAQS SIP Submissions", as referenced above (Please see Attachment A). The Division appreciates the opportunity to comment on the U.S. EPA's draft guidance document and urges U.S. EPA to make significant, necessary changes as a result of reviewing comments from state air pollution control agencies, including those submitted by the Division. With limited budgetary and personnel resources, the economic burden to comply with this rule as proposed is a significant concern and may be detrimental to the Division's ability in fulfilling its statutory obligations under the Clean Air Act and Kentucky Revised Statute 224.

Although comments related to this issue are included in Attachment A, the Division emphasizes its disapproval of using modeling demonstrations for the designations of a NAAQS. The hybrid approach of requiring both ambient air monitoring data and a theoretical modeling demonstration to determine attainment status is unprecedented. Finalizing the hybrid approach to demonstrate NAAQS compliance without the input from states or the possibility of state review of implementation guidance results in an impossible timeframe for the Division to complete and submit a substantive attainment SIP. This approach creates overwhelming economic burdens and hardships for state and local air quality control agencies during a difficult time with limited resources.

As mentioned, many of the concerns expressed by the Division are shared by several state air pollution control agencies. In a letter dated November 21, 2011, ten (10) chief administrators of environmental agencies in their respective state conveyed a series of concerns and recommendations related to this rulemaking. The referenced letter and accompanying technical document are also hereby submitted and included as Attachment B.

Again, the Division appreciates the opportunity to comment on the U.S. EPA's "Guidance for 1-Hour SO_2 NAAQS SIP Submissions." If you have any questions regarding the Division comments being provided, please contact Ms. Andrea Smith at (502) 564-3999 or andrea.smith@ky.gov.

Sincerely,

John S. Lyons
Director

Enclosures

ATTACHMENT A

Docket ID No. EPA–HQ–OAR–2010–1059
Federal Register Vol. 76, No. 61098, Guidance for 1-hour SO_2 NAAQS SIP Submissions
Comments from the Kentucky Division for Air Quality

Docket ID No. EPA–HQ–OAR–2010–1059
Federal Register Vol. 76, No. 61098, Guidance for 1-hour SO_2 NAAQS SIP Submissions

Comments from the Kentucky Division for Air Quality (Division)

EPA COMMENT:
Schedule for implementation of the 1-hour SO_2 NAAQS
Page 7, the guidance states:

> *June 2013: All states submit CAA section 110(a)(1)-(2) SIPs. SIPs address PSD and infrastructure requirements, and provide for implementation and maintenance of the 1-hr NAAQS in all areas throughout the state, particularly in areas initially designated unclassifiable and attainment. SIPs for unclassifiable areas would rely on refined modeling and any monitoring that demonstrates attainment and maintenance of the new SO_2 NAAQS as expeditiously as practicable, which EPA anticipates should be no later than the attainment deadline for areas initially designated nonattainment. SIPs should contain any additional federally enforceable control measures necessary to ensure maintenance of the NAAQS. Attainment demonstration SIPs for nonattainment areas have a separate deadline.*

Division's Response:

From a state air quality regulatory agency's perspective, a deadline of June 2013 is impractical for two specific reasons, conducting refined modeling without final guidance and determining appropriate, necessary federal control measures. First, EPA should re-evaluate the hybrid approach for attainment classifications. If EPA is unwilling to revise the policy position of requiring modeling for attainment designations, EPA should then strongly reconsider the deadline based on the limited amount of resources available to states to perform the initial modeling demonstration, negotiate and modify permits, and finalize the concluding modeling demonstration ensuring compliance with the standard.

As mentioned, determining the appropriate and necessary federal control measures that may or may not be applicable August 2007 is an impossible date for state agencies to incorporate into their respective SIPs. As you are aware, the final effective date of the "Boiler MACT" has been delayed until such time as judicial review is no longer pending or until the EPA completes its reconsideration of the rules, whichever is earlier. The regulatory uncertainty associated with this delay, as well as other uncertainties associated with the Cross-State Air Pollution Rule (CSAPR) and the Mercury and Air Toxics Standards (MATS) rule, prevents states from including those particular significant federally-enforceable control measures into the SIPs.

Additionally, placing the same SIP requirements on unclassifiable areas as those in non-attainment is overly burdensome, potentially preventing economic growth with little or no environmental protection for the preservation of existing clean air resources.

EPA COMMENT:
Section 110(a)(1) and (2) NAAQS maintenance/infrastructure elements

Page 8 and 9, the guidance states:

> *...Where sources of SO_2 are determined to cause or contribute to NAAQS violations, states should include in the 110(a)(1) SIPs sufficient permanent and enforceable control measures to ensure the NAAQS is attained and maintained as expeditiously as practicable.*

Division's Response:

As stated previously, EPA's expectations for states to complete refined modeling is unreasonable, especially considering that the guidance is "draft" and not "final". Furthermore, it is impractical to have federally-enforceable emissions limits in permits and a modeling demonstration indicating compliance by June 2013. Please refer to the comment above. If EPA continues to apply the policy decision to require modeling demonstrations pursuant to Section 110(a)(1) of the CAA, the Division finds it more appropriate to include a timeline in the infrastructure SIP submittal that details the modeling plan that will be utilized to demonstrate compliance before the 2017 date.

EPA COMMENT:
Page 9, the guidance states:

> *We expect that states would focus performance of attainment demonstration modeling on areas with larger sources (e.g., those sources emitting over 100 tons per year (tpy) of SO_2), and any other sources that we anticipate to cause or contribute to a violation to determine compliance with the new SO_2 NAAQS.*

Division's Response:

Through final rulemaking, EPA should specify whether the sources emitting over 100 tons per year is based on actual or potential emissions here and throughout the document.

EPA COMMENT:
Section 110(a)(1)-(2) SIP submission
Page 10, the guidance states:

> *Section 192 requires nonattainment areas to achieve the 1-hour SO_2 NAAQS as expeditiously as practicable, but no later than 5 years after designation, which EPA expects to be by no later than August 2017. Section 110(a)(1), unlike section 192, does not specify a deadline by which states are required to show when they have met the requirements to implement, maintain, and enforce a NAAQS. However, EPA believes it is generally reasonable for attainment to be achievable in unclassifiable areas within the same five year timeframe as is mandated for nonattainment areas.*

Division's Response:

Oddly, EPA requirements for areas designated attainment or unclassifiable under the SO_2 NAAQS are more stringent than the requirements imposed by the CAA on areas designated nonattainment. The Division agrees that areas classified as attainment or unclassifiable have no specific compliance deadline in the CAA and should not be subject to more stringent requirements than nonattainment areas. Furthermore, EPA has provided no evidence that it has adequately considered the economic burden and hardship this strategy would impose on state regulatory agencies.

EPA COMMENT:
Page 10, the guidance states:

> *In order to demonstrate attainment and maintenance, SIPs for unclassifiable areas, just as for nonattainment areas, should include enforceable emissions limitations, timetables for compliance, appropriate testing/reporting to assure compliance, and include air quality modeling for SO_2 sources showing that the SIP-adopted emissions limits are consistent with attainment of the 1-hour NAAQS. EPA believes it is reasonable to expect states to demonstrate, at a minimum, that major SO_2 sources ($\geq$ 100 tpy) are not causing or contributing to violations of the 1-hour SO_2 NAAQS.*

Division's Response:

In an attempt to comply with this guidance, re-opening existing operating permits to include 1-hr SO_2 emission limitations is not practical. This guidance should allow for the federally-enforceable emissions limitations to be included in a federally-enforceable operating permit when the permit is opened for renewal or revision. Furthermore, the guidance recommends a demonstration for major SO_2 sources (>100 tpy) at a minimum (major source status is based upon potential to emit); however, Section IV. B (pg 16) suggests focusing on sources with emissions in excess of 100 tpy (actual emissions). It is unclear whether the threshold should be based on actual or allowable emissions. If EPA continues applying the policy of requiring modeling demonstrations for attainment designations, the Division recommends the use of actual emissions greater than 100 tpy as an initial step to evaluate the areas of greatest concern and to reduce the workload due to limited resources. Kentucky cannot regulate by policy and without rulemaking and a consequent SIP revision, the Division would not have the authority to include federally-enforceable emission or operating limits where there is no specific federal regulation requiring the limitation.

EPA COMMENT:
Page 11, the guidance states:

> *A limited qualitative assessment based on the results of preliminary modeling of sample facilities indicates that effective SO_2 source control, such as the installation of SO_2 scrubbers, should generally suffice for areas to meet the 1-hour SO_2 NAAQS (see Brode 2010b). Exceptions could include unique sources with specific characteristics that contribute to higher ambient impacts (short stack heights, complex terrain, etc.).*

Division's Response:

The Division agrees that EPA has conducted limited qualitative assessment of preliminary modeling and would suggest EPA to perform more comprehensive modeling to gain an appreciation and understanding of the technical challenges states will encounter with limited resources. Several comprehensive modeling demonstrations may establish a more appropriate de minimis level and also streamline the modeling approach.

In addition, if the installations of scrubbers generally suffice for areas to meet the 1-hour SO_2 NAAQS, then those units and units with similar emission profiles should be exempt from the modeling demonstration. Please note that Brode 2010b is not listed in section 12, References.

EPA COMMENT:

Page 12, the guidance states:

> *The section 110(a)(1) SIP should also contain the following elements: (1) an attainment emissions inventory; (2) a control strategy, as appropriate; (3) a maintenance demonstration using an EPA-approved air quality dispersion model, as appropriate; (4) a contingency plan; and (5) a plan for verification of continued attainment of the standard.*

Division's Response:

The SIP requirements established through this guidance appear to expand and modify the intent of Section 110(a)(1) of the CAA. Please note that Kentucky is prohibited from expanding or modifying the statutory requirements pursuant to Kentucky Revised Statute (KRS) 13A.130 (1), "An administrative body shall not by internal policy, memorandum, or other form of action: (a) Modify a statute or administrative regulation; (b) Expand upon or limit a statute or administrative regulation; ..."

EPA COMMENT:

Page 12, the guidance states:

> *The state should develop an accurate attainment inventory to identify the level of emissions in the area sufficient to attain the 1-hour SO_2 NAAQS. This inventory should be consistent with EPA's most recent guidance on emissions inventories currently available, and should include the emissions for the time period associated with the modeling and monitoring data showing attainment.*

Division's Response:

Guidance on emission inventories for various attainment and maintenance plans vary depending on the pollutant, EPA regional office, and in some cases area-specific issues regarding pollutant chemistry and meteorology. EPA should define the specific requested requirements that are necessary for inventory submittal and approval.

EPA COMMENT:
Page 13, the guidance states:

> *With representative and appropriate meteorological and other input data, refined dispersion models are able to characterize air quality impacts from the modeled SO_2 sources across the domain of interest on an hourly basis with a high degree of spatial resolution, overcoming the limitations of an approach based solely on monitoring. By simulating plume dispersion on an hourly basis across a grid of receptor locations, dispersion models are able to estimate the detailed spatial gradients of ambient concentrations resulting from SO_2 emission sources across a full range of meteorological and source operating conditions. To capture such results on a monitor would normally require a prohibitively expensive air quality monitoring network. Further, as we have observed in prior actions (see., e.g., 43 FR 45993, 45997, 46000-03 (October 5, 1978)), monitoring data would not be adequate to demonstrate attainment if sources are using stacks with heights that are greater than good engineering practice (GEP), or other prohibited dispersion techniques, since in those cases monitoring would implicitly reflect credit for such practices in contravention of section 123 of the CAA and our regulations at 40 CFR sections 51.100 and 51.118.*

Division's Response:

The comment above appears to directly conflict with the guidance EPA provided relative to PSD modeling, Memorandum from Anna Marie Wood, Air Quality Policy Division, to EPA Regional Air Division Directors, "General Guidance for Implementing the 1-hour SO_2 National Ambient Air Quality Standard in Prevention of Significant Deterioration Permits, Including an Interim 1-hour SO_2 Significant Impact Level" (August 23, 2010):

> *Section 51.100(hh)(2)(v) provides that identified techniques that increase final exhaust gas plume rise are not considered prohibited dispersion techniques pursuant to section 51.100(hh)(1)(iii) "where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year." Thus, proposed modifications that experience difficulty modeling compliance with the new I-hour SO_2 NAAQS when relying on BACT or an air quality-based emissions limit alone may permissibly consider techniques to increase their final exhaust gas plume rise consistent with these provisions.*

Kentucky acknowledges that refined dispersion models are able to characterize air quality impacts when representative and appropriate meteorological and other input data are used; however, this guidance recommends using GEP stack heights and allowable emission rates which in turn generate model concentrations that are not truly representative of the modeling domain. Furthermore, many facilities run well below their allowable limits. In an effort to reduce the burden placed on state air quality agencies before the June 2013 deadline, the suggested approach is to include a timeline in the infrastructure that details the modeling plan that will demonstrate compliance before the 2017 compliance date. This approach would allow the time necessary for sources to collect onsite meteorological data to avoid significant model performance degradation created by using non-representative NWS meteorological data.

Alternatively, EPA could abandon its plan for "substantive attainments SIPs" requiring statewide refined dispersion modeling all together. In addition, if federal regulations such as the industrial boiler MACT, MATS rule, and CSAPR are challenged or postponed, the permit limits that reflect the additional controls that could be in place by the compliance date may not be effective by June 2013 and would not be adequately accounted for in the 2013 modeling demonstration. Further, the Division would not have the authority to include enforceable emission or operating limits where there is no specific federal regulation requiring the limitation and since the industrial boiler MACT and the MATS rule do not set specific SO_2 limitations, the Division would not have legal authority to impose such limitations without a SIP revision.

EPA COMMENT:
Section 110(a)(1) SIPs
Page16, the guidance states:

> *EPA recognizes the resource burden potentially involved in conducting refined air quality modeling for every source of SO_2 emissions. As one example, states might focus their limited modeling resources on the largest sources of SO_2, such as those sources that are emitting at least 100 tpy, in recognition that these sources emit nearly all the emissions of SO_2 (just over 99% of all SO_2 emissions in 2005 from point sources in the country). States might also focus on those sources located in areas where there is the highest potential for citizen exposure to elevated ambient SO_2 levels. Therefore, EPA is seeking comments and recommendations on reasonable approaches to determining which sources should be modeled.*

Division's Response:

As discussed previously, EPA should abandon the policy of classifying attainment areas for the 1-hour SO_2 NAAQS through air dispersion modeling. However, if EPA is unwilling to modify its policy regarding modeling for attainment designations, EPA should established a reasonable approach to determine which sources should be modeled. As offered as an example, states should only be required to model sources actually emitting at least 100 tpy. Additionally, EPA should declare areas with combined actual annual emissions less than 100 tpy of SO_2 as "attainment".

EPA COMMENT:
Page 17, the guidance states:

> *Given the influence of stack parameters and other factors on the concentrations that result from a given quantity of emissions, EPA recognizes that an approach that only considers sources emitting more than a specified emissions threshold may in some cases overlook sources that have lower emissions but nevertheless have the potential to cause or contribute substantially to violations of the standard. EPA also recognizes that EPA and the states have substantial experience with modeling SO_2 concentrations, and so EPA and the states have substantial experience in judging the kinds of circumstances that might be expected to have relatively high SO_2 concentrations. This suggests the possibility of hybrid approaches in which the state addresses all sources emitting more*

than a given threshold, and in addition addresses sources that by reasonable judgment might be expected to contribute to ambient SO_2 concentrations above the NAAQS. An example of this approach would be for a state to model all sources with emissions of at least 100 tpy as well as all smaller sources that are judged to be in circumstances that might create high ambient SO_2 concentrations, such as low stack heights, building downwash, complex terrain, or clustering of multiple sources. States may wish to also place priority on conducting additional analyses in areas where significant population exposure to elevated ambient SO_2 may be occurring.

Division's Response:

EPA initially suggests states to focus on sources with emissions in excess of 100 tpy to reduce workload. EPA then suggests states to evaluate other sources that have circumstances that might create high ambient SO_2 concentrations. The Division suggests EPA to establish a de minimis level, as done in the past (e.g. PSD) to reduce the burden of evaluation on states with limited resources.

EPA COMMENT:
Page 17, the guidance states:

However, any source that is modeled at less than its PTE for purposes of demonstrating attainment of the standard should receive a SIP enforceable emission or operating permit limit that is consistent with the modeled levels.

Division's Response:

To reiterate, re-opening existing permits to add 1-hr SO_2 limitations before the attainment demonstration is due is not practical. This guidance policy should allow for the condition to be added when the permit is up for renewal or revision, consistent with 40 CFR Part 70. Please note that the Division would not have the authority to include federally-enforceable emissions or operating limitations where there is no specific federal regulation requiring the limitation.

EPA COMMENT:
Page 18, the guidance states:

An approvable CAA section 110(a)(1) SIP would need to appropriately and accurately assess the degree that sources throughout the state cause or contribute to violations of the SO_2 NAAQS, but it might not be necessary for states to address all sources of SO_2 in an area in order to demonstrate attainment and maintenance of the NAAQS. However, any source that is modeled at less than its PTE for purposes of demonstrating attainment of the standard should receive a SIP enforceable emission or operating permit limit that is consistent with the modeled levels. These decisions, of course, should be made by the state on a case-by-case basis depending on the attainment needs of the affected area(s). We are seeking input on approaches such as those discussed above for states to identify appropriate threshold levels, as well as any other emissions-related parameters, or guiding principles, that may help states and EPA better focus on the sources of SO_2 most

likely to cause or contribute to a violation of the new 1-hour SO_2 NAAQS and impact the most populated areas. For example, we welcome any supportable information on the configurations and operating characteristics for typical SO_2 sources that might be most likely to cause a violation (e.g., uncontrolled coal-fired power plants greater than 250MW with stack height less than 50 feet). Conversely, we would also appreciate supportable information on the configurations and operating characteristics for SO_2 sources that are not likely to cause a violation.

Division's Response:

EPA is calling for supporting information to develop thresholds levels for particular operating characteristics to help states focus on the sources most or least likely to cause or contribute to a violation. In addition, EPA should call for information to support not modeling an area (e.g. a county) under a particular threshold. A demonstration of the SO_2 emissions inventory of all the sources within that area are below a threshold as a whole or individually should be adequate for the demonstration. Furthermore, the facilities and areas selected to be modeled are assumed to have the highest potential to cause a violation of the standard, if no violations are modeled then any areas outside of these domains should be logically assumed to be in attainment without further demonstration.

In attempt to provide "supportable information on the configurations and operating characteristics for SO2 sources that are not likely to cause a violation", the Division directs EPA to review its Memorandum from Anna Marie Wood, Air Quality Policy Division, to EPA Regional Air Division Directors, "General Guidance for Implementing the 1-hour SO_2 National Ambient Air Quality Standard in Prevention of Significant Deterioration Permits, Including an Interim 1-hour SO_2 Significant Impact Level" (August 23,2010):

The definition of "dispersion technique" at 40 CFR 51.100(hh) (1)(iii) describes techniques that are generally prohibited, but which do not apply with respect to the exemption for SO_2. Accordingly, it is permissible for eligible SO_2 sources to make adjustments to source process parameters, exhaust gas parameters, stack parameters, or to combine exhaust gases from several existing stacks into one stack, so as to increase the exhaust gas plume rise. It is important to remember that the exemption applies to sources that have facility-wide allowable SO_2 emissions of less than 5,000 tpy resulting from the increase in final exhaust gas plume rise. Thus, proposed modifications should not base their eligibility to use dispersion on the amount of the proposed net emissions increase, but on the total source emissions of SO_2.

The EPA does not recommend or encourage sources to rely on dispersion to demonstrate compliance with the NAAQS; however, we acknowledge the fact that certain SO_2 sources may legally do so. For example, while increasing stack height is a method of dispersion, EPA's rules allow use of that approach to the extent the resulting height meets EPA's requirements defining "good engineering practice (GEP)" stack height. See 40 CFR 50.100(hh) (1)(i), 50.100(ii)(l)-(3).

EPA COMMENT:
Page 18, the guidance states:

> *If no emissions reductions are needed to ensure attainment and maintenance of the 1-hour SO_2 NAAQS, the SIP should indicate the mechanisms that the state will use to ensure the area remains in attainment.*

Division's Response:

If no emissions reductions are needed to ensure attainment and maintenance, then there is no need to indicate the mechanisms that the state will use to ensure that area remains in attainment. Any major facility that proposes to move into the area will have to perform PSD modeling demonstrating that the proposed project will not cause or contribute to a violation of the NAAQS, which should satisfy this requirement. EPA should remove this statement from the guidance.

EPA COMMENT:
Page 18 and 19, the guidance states:

> *In making the showing that the improvement in air quality (or already acceptable air quality) is due to permanent and enforceable measures, the state should estimate the percent emission reductions achieved from national, regional, and local control measures.*

Division's Response:

This demonstration will be limited to point sources and will include source specific reductions. There is no need to estimate the percent of reductions as well. The Division does not see any benefit in adding this extra work to an already insurmountable workload under the current time constraints.

EPA COMMENT:
Pages 19 and 20, the guidance states:

> *This rule does not specify plant-specific emission limits. Instead, this rule establishes caps on total emissions from the set of affected facilities in each state, and provides for issuance of a number of emissions allowances in each state corresponding to the applicable caps. It allows trading of allowances, so that each source may have more or less emissions so long as the source emits no more than the number of allowances it holds either through issuance or through purchase. Thus, the rule does not require that a specific degree of emissions control will be achieved at any particular facility. Nevertheless, the emission caps are such that the rule will result in substantial additional control of SO_2 and NO_x emissions. This control is mandated by 2012 and 2014 (representing start dates for two stages of caps under CSAPR), which is well within expected attainment timeframes for the 1-hour SO_2 NAAQS. EPA expects these controls generally to suffice for achieving attainment. Therefore, for such facilities, negotiation*

and establishment of suitable emission limits will be far simpler than would be the case if the state and the company had to negotiate whether control equipment was necessary. Furthermore, the state has the option to negotiate with its sources to pursue a distribution of controls under CSAPR that optimizes the achievement of attainment of the SO_2 standard. For example, the state has the option under CSAPR to revise the allocation of allowances to mirror the distribution of emissions that best serves the purpose of attaining the SO_2 standard[9].

Division's Response:

The Division is concerned that the time and resources to coordinate and negotiate limits with stakeholders as well as perform adequate modeling to demonstrate compliance is unachievable by the June 2013 date. Further, clarification needs to be made on which year's allocation limits should be used in the model. Finally, by reading this language and comparing the Courts remand without vacating the CAIR, it appears that CSAPR suffers the same fatal flaws of CAIR that led to its ultimate remand.

EPA COMMENT:
Page 20, the guidance states:

EPA expects these controls generally to suffice for achieving attainment. Therefore, for such facilities, negotiation and establishment of suitable emission limits will be far simpler than would be the case if the state and the company had to negotiate whether control equipment was necessary.

Division's Response:

Since additional controls as a result of the CSAPR are effective in achieving attainment, then those units and units with similar emission profiles should be exempt from the modeling demonstration. The guidance should account for national measures to reduce the resource burden to states. One option would be to establish a post-control de minimis threshold.

EPA COMMENT:
Page 21, the guidance states:

For SO_2 controls to be creditable for SO_2 NAAQS planning purposes, they need to apply to the source as enforceable 1-hour SO_2 emission limits on the specific source. The controls and associated 1-hour SO_2 emissions limits would need to become permanent and enforceable under the SIP, even if they might not be required to be so under the CSAPR.

Division's Response:

As stated previously, re-opening existing permits to add 1-hr SO_2 limitations before the attainment demonstration is due is not practical. This guidance should allow for the condition to be added when the permit is up for renewal or revision and be consistent with 40 CFR Part 70.

To reiterate, the Division would not have the authority to include enforceable emission or operating limits where there is no specific federal regulation requiring the limitation.

EPA COMMENT:
Page 22, the guidance states:

> *... However, as promulgated, the Industrial Boilers MACT does not set specific limits on emissions of SO_2. Therefore, to rely upon SO_2 reductions resulting from this rule to assure attainment and maintenance of the 1-hour SO_2 NAAQS, states would need to also establish 1-hour SO_2 emission limits to assure that any control measures used to comply with MACT requirements are designed and/or operated to provide the necessary control of SO_2 emissions as well. If the MATS Rule is promulgated similarly, i.e., it sets emission limits for HAPs but does not set specific 1-hour SO_2 emission limits, then states would need to set 1-hour SO_2 emission limits for these facilities as well, to the extent such limits are needed to assure attainment and maintenance of the 1-hour SO_2 NAAQS.*

Division's Response:

If federal regulations are challenged or postponed, the permit limits that reflect the additional controls that could be in place by the 2017 compliance date may not be set nor adequately accounted for in the 2013 modeling demonstration. Re-opening existing permits to add 1-hr SO_2 limitations before the attainment demonstration is due is not practical. This guidance should allow for the condition to be added when the permit is up for renewal or revision and should be consistent with 40 CFR Part 70. Again, the Division would not have the authority to include enforceable emission or operating limits where there is no specific federal regulation requiring the limitation. Since the Industrial Boiler MACT and the MATS do not set specific SO_2 limitations, the Division would not have legal authority to impose such limitations without a source-specific SIP revision.

EPA COMMENT:
Page 23 and 24, the guidance states:

> *Since SO_2 control measures are based on what is directly and quantifiably necessary to attain the SO_2 NAAQS, we expect that it would be unlikely for an area to implement the necessary and appropriate emission controls yet fail to attain and maintain the NAAQS.*

Division's Response:

It is unclear how EPA came to this conclusion in the absence of a quantitative dispersion modeling analysis. EPA should disclose the information that leads them to this conclusion. Furthermore, if EPA believes that facilities that have appropriate control measures are unlikely to cause or contribute to a NAAQS violation, it should exempt those emission units and units with similar profiles from the modeling analysis. Moreover, EPA should provide states with a catalog indicating the specific "necessary and appropriate emission controls" to which they refer.

EPA COMMENT:
Pages 24 and 25, the guidance states:

> *States should provide an indication of how they will track the progress of the section 110(a)(1) plan. In most cases, tracking compliance with applicable emission limits, along with tracking whether background concentrations are changing, should suffice for verifying continued attainment. We expect that a need for more thorough tracking of emissions and air quality would arise mainly in areas with multiple area sources, areas with sources for which emissions are difficult to track, and areas where the success of the attainment plan may be particularly uncertain.*

Division's Response:

This requirement should be removed for attainment and unclassifiable areas. There is no requirement in the CAA or in existing guidance for verification of continued compliance. The modeling demonstration for these areas will be conservative, background monitoring data is unavailable for many areas, and major and conditional major sources are inspected biannually for compliance. New PSD/NSR sources are required to demonstrate that their projected emissions do not cause or contribute to a NAAQS violation as well.

EPA COMMENT:
Redesignation to attainment for areas designated as unclassifiable
Page 25, the guidance states:

> *The CAA does not clearly specify the conditions for redesignating an area from "unclassifiable" to "attainment." CAA section 107(d)(3)(E) only addresses conditions for redesignating areas from "nonattainment" to "attainment." Nonetheless, EPA believes that for the 1-hour SO_2 NAAQS the criteria closely derived from section 107(d)(3)(E) would be appropriate. Accordingly, for an area initially designated as "unclassifiable" to be redesignated as attainment, EPA expects to apply the following criteria to meet the principles of CAA section 107(d)(3): (1) EPA has determined that the area is attaining the NAAQS; (2) the area has a fully approved section 110(a)(1) SIP; (3) EPA has determined that the attainment-level air quality in the affected area is attributable to any necessary permanent and enforceable emissions measures; (4) the area has met all of the requirements of section 110 of the CAA; and (5) the state has verified implementation of the approved 110(a)(1) SIP control measures.*

Division's Response:

The Division strongly disagrees with this approach of requiring the same conditions for redesignating areas from unclassified to attainment as would be for redesignating areas of nonattainment to attainment. It is not appropriate, and most likely contrary to the CAA, to require the same requirements to redesignate an unclassifiable area as for a nonattainment area. This approach is a paramount policy shift by EPA on how to treat unclassified areas; EPA has historically treated unclassified areas the same as attainment areas.

EPA COMMENT:
Page 26, the guidance states:

> *The justification for redesignation from unclassifiable to attainment would need to include modeling information except where modeling is shown to be inappropriate (if, for example, sources are poorly characterized) or unnecessary (if an unclassifiable area is found to have only de minimis emissions).*

Division's Response:

Based on 2010 emissions data, there are 27 counties in Kentucky with actual SO_2 emissions greater than 100 tpy. Over 99% of Kentucky's SO_2 emissions come from sources that emit greater than 100 tpy. Kentucky agrees with EPA in that the remaining 1% of emissions would be accounted for in monitoring or regional background levels. Kentucky suggests that EPA establish a *de minimis* level regarding area evaluation and monitor location. If an entire county has actual emissions less than 100 tpy, then no modeling and no monitoring should be necessary to deem the area as "attainment." An emissions inventory of all SO_2 sources within the county showing historical emissions data (i.e. maximum actual emission totals per county from 2007-2010) should suffice. If a demonstration can be made of counties with significantly higher emission rates being below the standard, it stands to reason that lower emitting counties would also be below the standard and not require any further analysis.

EPA COMMENT:
Page 26, the guidance states:

> *In making this showing, the state should provide reliable estimates of the percent reduction in SO_2 emissions from national, regional, and local measures that have been implemented in the affected area.*

Division's Response:

EPA should remove this requirement. It provides no additional insight for unclassified areas that are being redesignated as attainment. Furthermore, many areas will not require any reductions to meet the requirements for redesignation to attainment.

EPA COMMENT:
Appendix A - Modeling Guidance for Nonattainment Areas and Section 110(a)(1) Plans
Page A-1, the guidance states:

> *In the final rule preamble, EPA outlined a possible analytic approach to determining compliance with the new NAAQS that would include the use of both modeling and monitoring.*

Division's Response:

EPA fails to address what role and its significnace, if any, monitoring will play in the NAAQS compliance demonstration. Other than background monitoring for use in the modeling demonstration, EPA should give examples of situations where monitoring will play a part, or be relied upon solely, in the "analytic approach to determining compliance with the new NAAQS." The Division determines that monitoring data alone should be used to demonstrate compliance with the new NAAQS and should also be used to validate modeling performance.

EPA COMMENT:
Page A-3, the guidance states:

> *For SIP development under the 1-hour SO_2 primary NAAQS, AERMOD should be used unless use of an alternative model can be justified (Section 3.2, Appendix W), such as the Buoyant Line and Point Source Dispersion Model (BLP).*

Division's Response:

Guidance is necessary on how to merge Buoyant Line and Point (BLP) modeling with AERMOD modeling or whether this would be a recommended method for modeling certain source categories. BLP modeling is dated (i.e. can only have one hundred receptors at any given time). Issues arise when it comes to merging the BLP and AERMOD data and also the number of BLP runs that are needed to sufficiently cover the modeling domain at fine receptor grid resolutions. Furthermore, BLP does not have an output in ppb and doesn't have a post-processor available that gives a concentration per receptor per day. Kentucky recommends EPA to integrate BLP modeling algorithms into AERMOD.

EPA COMMENT:
Page A-4, the guidance states:

> *The sources to be explicitly modeled within each area should include the larger sources and others that potentially contribute to violations for the state to have the greatest flexibility in determining controls across sources, as necessary, to attain the NAAQS.*

Division's Response:

The Division does not define or "redefine" a source by determining what the best control technology is for its emissions. Kentucky evaluates BACT analysis when required to determine the best available control technology determined by the source. EPA should consider revising this statement.

EPA COMMENT:
Page A-4, the guidance states:

> *If there are still predicted violations of the NAAQS, continue to assess additional controls until no predicted violations occur.*

Division's Response:

If a facility cannot meet the NAAQS with reasonable control measures, it appears that emission limits beyond the control efficiency must be set. Setting limits beyond the best available control technology will retard, if not completely eliminate, manufacturing production and economic growth. Considering the conservative nature of modeling demonstrations, the Division recommends that in the case of a residual NAAQS violations post reasonable control measures EPA should develop a monitoring approach that would ensure compliance with the new NAAQS.

EPA COMMENT:
Page A-6, the guidance states:

> *It is reasonable to initially focus on the most significant sources of SO_2 emissions, e.g., sources emitting more than 100 tons (maximum allowable)[18] per year.*

Division's Response:

Here the guidance indicates that the initial focus should be on sources that emit more than 100 tpy (maximum allowable). The word "emit" indicates actual emissions. This guidance is contrary to the previous recommendation in Section 4 of page A-4 that states *"While maximum allowable emissions would be used in the refined SIP modeling demonstration, initial information gathering could be focused on actual emissions for larger sources of 100 tpy or more as an initial screening of sources to possibly include in refined modeling[16]"*. The Division requests EPA to clarify which threshold should be used.

EPA COMMENT:
Page A-7, the guidance states:

> *Sources found not to be represented by monitored background may also be examined through the use of screening models to see if they should or should not be included in the refined modeling. We recommend the use of EPA's new screening model AERSCREEN (U.S. EPA, 2011f, U. S. EPA, 2011g) and following recommendations based on pre-existing screening guidance (U.S. EPA, 1992). For small isolated sources, screening may be useful on a source by source basis. However, for a cluster of small sources, their cumulative impact should also be assessed. Individual sources may not be significant by themselves, but in clusters together they may potentially cause or contribute to a NAAQS violation. Although AERSCREEN does not output a design value concentration based on the 99th percentile form of the 1-hour SO_2 standard, it does output the overall maximum 1-hour concentration which could be used as a conservative estimate for comparison with the NAAQS and EPA's suggested interim significant impact level (SIL) for the 1-hour SO_2 NAAQS of 3 ppb[19]. If the maximum 1-hour concentration output from AERSCREEN violates the NAAQS, it does not mean that the source is in nonattainment, but that the source should be evaluated using refined dispersion modeling (See Step 3 below for more details).*

Division's Response:

The recommendation of using AERSCREEN for small isolated sources or cluster of small sources is unreasonable. AERSCREEN can only assess one unit at a time and the time that it takes to assess a cluster of sources would certainly increase the already unmanageable workload that states already have. The Division will already be analyzing those facilities that make up greater than 99% of the actual emissions of the state. EPA could develop tools to aid states in assessing clustered sources, by developing a sliding scale using stack heights, emission rates, and/or a *de minimis* level of emissions per square kilometers. EPA could justify the scale using a number of sensitivity runs using either AERSCREEN or AERMOD. The method of assessing of clusters and small isolated sources should ultimately be left up to the states.

EPA COMMENT:

Page A-12, the guidance states:

> *...Appendix W also recommends modeling at 50% and 75% of capacity to determine the load that may cause the highest concentration because changes in stack parameters in loads less than 100% of capacity may cause higher ground level concentrations.*

Division's Response:

The Division agrees that the loads less than 100% capacity may cause higher ground level concentrations; however, load capacity does not usually result in a significant increase in concentration as compared with 100% load and the a majority of the time a facility's worst case scenario is at 100% load capacity. The time that it takes to collect this information for hundreds of emission units is beyond the scope of this demonstration. Plus, this information is not indicated in the permit and would be time consuming to obtain. It is unreasonable to assume that all facilities within a domain would be operating at its worst-case load simultaneously. Using the maximum allowable emission rate should be conservative considering the probabilistic form of the standard and the conservative nature of the model. This type of analysis should only be done if the cumulative concentration is slightly below an exceedance of the NAAQS.

EPA COMMENT:

Pages A-12 and A-13, the guidance states:

> *Once sources have been identified within the nonattainment or unclassifiable area that may cause or contribute to NAAQS violations, the process of identifying and modeling the effect of control strategies begins. In some cases, control of one source may allow an area to be in attainment, while in other cases, controls could be implemented on several sources to share the control responsibility to demonstrate the area to be in attainment. As stated in Section B.1 of the SIP guidance document, states should develop an accurate attainment inventory to identify the level of emissions in the area sufficient to attain the 1-hour SO_2 NAAQS and be consistent with EPA's most recent guidance on emissions inventories.*

Division's Response:

States will have difficulties meeting the deadline individually and many states will be negotiating new federal limits that may change the modeling demonstrations prior to the 2013 deadline. Furthermore, the emissions limitations that result from modeling can only be implemented on Kentucky sources. Implementation of limitations on sources outside of Kentucky that may cause or contribute to violations in Kentucky will have to result from negotiations and agreements between state, local, and regional agencies. This process can be an extremely complex and time consuming. For this reason, EPA should reconsider the deadline of June 2013 for showing compliance for unclassified areas. In addition, EPA should give a reference to the guidance in which they are referring to for emissions inventories.

EPA COMMENT:
Page A-14, the guidance states:

> *If stack heights exceed GEP, then GEP heights should be used with the individual stack's other parameters (temperature, diameter, exit velocity). For stacks modeled with actual heights below GEP, building downwash should be considered as this can impact concentrations near the source (Section 6.2.2b, Appendix W). If building downwash is being considered, the BPIPPRIME program (U.S. EPA, 2004d) should be used to input building parameters for AERMOD. More information about buildings and stacks is in Section 6.5.*

Division's Response:

Although 40 CFR 50.118 prohibits dispersion techniques by modeling above GEP, it does not restrict the actual physical stack height of the source. Modeling on the actual stack height will determine the areas of actual concern, opposed to theoretical concern. It should be determined whether and where the source could potentially impact the NAAQS using actual stack height, then if it causes or contributes to a violation then use the GEP stack height, remodel and then impose the limits based on that value. An inventory of nearby structures is not a reality at this time and would take extensive time to obtain for a BPIP analysis.

EPA COMMENT:
Page A-23, the guidance states:

> *In areas with SO_2 sources where the state has determined that there is no representative meteorological data, it may be difficult to perform accurate refined dispersion modeling for the implementation modeling.*

Division's Response:

A facility may wish to collect onsite meteorological data based on the concern that there is the potential for significant model performance degradation when using NWS data. EPA's past evaluations of AERMOD performance state that "the AERMOD dispersion model exhibits generally better performance using the full onsite meteorological data as compared to using a

single level (10-meter) of onsite meteorological data." (See *Minimum Meteorological Data Requirements for AERMOD – Study and Recommendations*; December 14, 1998; AERMIC Committee) NWS data, in most cases, is collected using a 10-meter offsite tower. States will need to evaluate these situations on a case-by-case basis and may need an additional year to collect the representative onsite meteorological data.

EPA COMMENT:
Page A-23, the guidance states:

> *As discussed in EPA's March 1, 2011 memo "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1- hour NO_2 Ambient Air Quality Standard" (U. S. EPA, 2011a), and the March 24, 2011 SO_2 designations guidance memo (U.S. EPA, 2011b) we recommend a less conservative "first tier" approach for a uniform monitored background concentration based on the monitored design values for the latest 3-year period, regardless of the years of meteorological data used in the modeling. Adjustments to this approach may be considered in consultation with the appropriate EPA Regional Modeling Contact with adequate justification and documentation of how the background concentration was calculated.*

Division's Response:

In lieu of using monitoring values to derive a background values for areas in Kentucky, we propose to use regional background values that are derived using CMAQ modeling data as provided by SESARM (originally developed for VISTAS). The use of existing air quality monitoring to represent background concentrations can be overly conservative because most of these monitors have some impact from the facilities that are being explicitly modeled (100 tpy actual point source emissions threshold represents 99.5% or greater of the total SO_2 emissions inventory across the point source sector). EPA fails to address how to determine an appropriate background for areas with multiple monitors.

EPA COMMENT:
Page A-24, the guidance states:

> *Section 8.2.2 of Appendix W gives guidance on background concentrations for isolated single sources and is also applicable for multi-source areas. One option is, as described in Section 8.2.2.b: "Use air quality data in the vicinity of the source to determine the background concentration for the averaging times of concern. Determine the mean background concentration at each monitor by excluding concentrations when the source in question is impacting the monitor... For shorter time periods, the meteorological conditions accompanying concentrations of concern should be identified. Concentrations for meteorological conditions of concern, at monitors, not impacted by the source in question, should be averaged for separate averaging time to determine the average background value. Monitoring sites inside a 90° degree sector downwind of the source may be used to determine the area of impact."*

Division's Response:

Section 8.2.2 of Appendix W guidance on how to exclude concentrations of the monitor when the source of interest is impacting the monitor may be appropriate for short-term averaging periods for a single source, but does not seem feasible for a multi-source area where sources could be impacting the monitor at any given time, assuming that the sources are located around and not to just one quadrant of the monitor. Furthermore, determining the meteorological conditions for a probabilistic standard seems unreasonable and very resource intensive for a one hour standard. A regional background level derived from CMAQ modeling appears to less resource intensive and a reasonable approach.

In reference to the Tables Page A-27, the coordinates of the violating receptor may be added to avoid confusion of whether this is the 4th highest 5 year average at a receptor or 4th highest 5 year average per facility regardless of location.

EPA COMMENT:
Appendix B – Guidance on Section 110(a)(2) Infrastructure SIP Elements
Page B-2, the guidance states:

> *EPA's policy position is that a state's certification made in connection with the 2010 1-hour SO_2 NAAQS should be included in a SIP submittal only after the state has provided public notice and opportunity for public hearing on its certification.*

Division's Response:

Since all portions of the SIP have already been provided to the public for comment and hearing, this requirement is redundant and should be removed from the guidance. This redundant requirement would add at least an additional 60 days to processing time.

EPA COMMENT:
Page B-3, the guidance states:

...the infrastructure SIP submission should include a list or table referencing all SO_2 emission reduction measures adopted and relied on by the state to meet other CAA requirements. Such SO_2 emission reduction measures may be a required part of a "maintenance track" attainment plan for the SIP submittal due in June 2013. The measures identified by the state should show, through dispersion modeling, that affected areas would be projected to be in compliance with the NAAQS as expeditiously as practicable, which we would expect to be no later than the year 2017.

Division's Response:

This requirement appears to be modifying and expanding the boundary of infrastructure into the area of attainment demonstration. Dispersion modeling should not be submitted with a list of adopted SO_2 reduction measures for an infrastructure SIP.

EPA COMMENT:
Page B-3 and B-4, the guidance states:

> *There are two issues that generally fall under this particular element of section 110(a)(2)(A) for which we are not prepared to issue guidance at this time. They are: (1) how states would need to address previously approved emissions limitations that may treat startup, shutdown and malfunction (SSM) events inconsistently with our longstanding guidance on excess emissions; and (2) how states would need to address previously approved variance provisions and "director's discretion" provisions that do not comport with EPA policy. We are currently discussing options for resolving these issues, taking into consideration several actions on state provisions relating to SSM and director's discretion in which EPA is currently engaged27 (e.g., infrastructure SIPs for Utah and North Dakota). Also, EPA has proposed to enter a settlement agreement that would obligate EPA to respond by August 31, 2012, to a petition for rulemaking filed by the Sierra Club that concerns SSM provisions in 39 states' SIPs . (See notice published in the Federal Register on September 1, 2011, at 76 FR 54465.) Under terms of this "Ozone Settlement Agreement," by August 31, 2012 EPA would either grant or deny the SSM petition with respect to states' individual provisions and further would take final action (such as an SSM SIP Call) with respect to those provisions on which we grant the petition.*

Division's Response:

The uncertainty of this issue causes concern for Kentucky and most likely the 39 states with approved SIPs that contain SSM provisions.

EPA COMMENT:
Page B-8, the guidance states:

> *Section 110(a)(2)(D)(i) provides for SIPs to include provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to nonattainment, or interfering with maintenance, of the NAAQS in another state.*

Division's Response:

Interstate transport provisions require a significant level of modeling, which may not be available by the time the infrastructure SIP is due.

EPA COMMENT:
Appendix C – Guidance on Non-modeling Technical Demonstration of Attainment

Division's Response:

The Division recommends that EPA establish a *de minimis* level regarding area evaluation and monitor location. If an entire county or region has actual emissions less than 100 tpy, then no modeling and no monitoring should be necessary to deem the area as "attainment."

An emissions inventory of all SO_2 sources within the county or region showing historical emissions data (i.e. maximum actual emission totals per county from 2007-2010) should suffice. In addition, states should be allowed to use their best judgment to identify scenarios where a cluster of small sources may cause a problem. If a demonstration can be made of counties with significantly higher emission rates being below the standard, it stands to reason that lower emitting counties would also be below the standard and not require any analysis.

General Comments from the Division regarding this draft non-binding guidance

Guidance on modeling facilities across state lines should be addressed. States will have difficulties meeting the deadline individually and many states will be negotiating new federal limits that may change the modeling demonstrations prior to the 2013 deadline. Furthermore, the emissions limitations that result from modeling can only be implemented by the Division on Kentucky sources. Implementation of limitations on sources outside of Kentucky that may cause or contribute to violations in Kentucky will have to result from negotiations and agreements between state, local, and regional agencies. Kentucky has 7 bordering states, two local agencies, and 4 regions all of which have varying procedures on how to address modeling and setting limits. For this reason, it would be appropriate to include a timeline in the infrastructure that lays out the modeling plan that will demonstrate compliance before the 2017 date. This would extend the time that states have to make an initial modeling demonstration, negotiating any new limits with facilities (working with local, state, and regional agencies), and make a final modeling demonstration showing attainment. Furthermore, the guidance lacks scenarios when monitoring data is not available in the area of concern.

The guidance does not acknowledge the challenges in coordinating multiple sources and the individual control programs. For example, it is likely that there will be multiple facilities that will require the installation of control equipment to achieve modeled NAAQS compliance. However, the level of control necessary will be a function of the air quality impacts of surrounding sources. Therefore, the coordination of these facilities in determining the appropriate level of control for each plant is an immense challenge. It will require the Division to work collectively with these stakeholders to identify the appropriate solution. Multiple modeling runs for multiple control scenario options and source configurations will likely be necessary performed either by the State or a facility contractor. The Division does not have the available resources to provide this level of service while still meeting its remaining obligations under the CAA. The cost to facilities is likely to be very high and the availability of qualified contractors to perform the work in a timely manner is of great concern.

Finally, EPA's intended strategy is inconsistent with Congress' intent for implementation of the CAA; is not developed transparently by allowing input from the state regulatory agencies in the development process; results in conflicts with the compliance timeframes of other regulatory programs for reducing SO_2 emissions; provides inadequate consideration to the economic burden it would imposes on state regulatory agencies; is not technically feasible within the limited time available for states with a significant number of existing SO_2 stationary sources; and provides no opportunity for due process until after EPA has formally disapproved a state implementation plan (SIP).

ATTACHMENT B

Docket ID No. EPA–HQ–OAR–2010–1059
Federal Register Vol. 76, No. 61098, Guidance for 1-hour SO_2 NAAQS SIP Submissions
November 21, 2011 letter and Discussion Paper from Ten Southern States

Alabama
Florida
Georgia
Kentucky
Mississippi

Southeastern States

North Carolina
South Carolina
Tennessee
Virginia
West Virginia

November 21, 2011

The Honorable Lisa P. Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Jackson:

The purpose of this letter is to convey a series of concerns and recommendations from the environmental agencies of ten southeastern states. As chief administrators of these agencies, we are responsible for protecting human health and the environment and we have a solid record of doing so, as evidenced by consistently improving air quality in the Southeast and the significant resources that we dedicate to this effort. We present to you herein our thoughts regarding draft guidance the United States Environmental Protection Agency (EPA) released September 22, 2011. EPA has stated its intention to use this guidance in implementation of the 2010 sulfur dioxide (SO_2) national ambient air quality standard (NAAQS). These concerns and recommendations include the following:

- EPA's proposed implementation approach is inconsistent with its long-term policies and is extremely resource-demanding. State implementation plan (SIP) submittal deadlines are not likely achievable. We believe that EPA should abandon its current implementation approach and instead develop a more reasonable approach that is adequately protective of air quality but does not place unnecessary and unrealistic administrative, technical, and cost burdens on our states.

- EPA should use only ambient air quality monitoring data to make initial designations of nonattainment areas for the revised SO_2 NAAQS.

- EPA's current plan Section 110(a)(1) of the Clean Air Act to require modeling for the state implementation plans that are due by June 2013 is a serious concern to our states, and we question EPA's significant departure from the way previous NAAQS have been implemented. We acknowledge that modeling may be necessary and appropriate in some cases to demonstrate compliance and impact to SO_2 ambient concentrations. However, historically the Section 110(a)(1) requirements have focused on the general information and authorities that constitute the "infrastructure" of the air quality management program. This is outlined in more detail in the enclosed discussion paper.

Numerous other concerns and recommendations are included in the discussion paper enclosed. We appreciate your consideration of these matters and look forward to EPA's favorable response. We stand ready to work with you and your staff in a cooperative and constructive manner to address these issues. Please contact any of the undersigned if you need additional information.

Best Regards,

Lance R. LeFleur, Director
Alabama Department of Environmental Management

F. Allen Barnes, Director
Georgia Environmental Protection Division

Trudy Fisher, Executive Director
Mississippi Department of Environmental Quality

Robert W. King, Jr., PE, Deputy Commissioner
South Carolina Department of Health and Environmental Control

David K. Paylor, Director
Virginia Department for Environmental Quality

Jeffrey Littlejohn, PE, Deputy Secretary
Florida Department of Environmental Protection

R. Bruce Scott, Commissioner
Kentucky Department for Environmental Protection

Dee Freeman, Secretary
North Carolina Department of Environment and Natural Resources

Robert J. Martineau, Jr., Commissioner
Tennessee Department of Environment and Conservation

Randy C. Huffman, Cabinet Secretary
West Virginia Department of Environmental Protection

cc: Senator Barbara Boxer
Senator James M. Inhofe
Congressman Ed Whitfield
Congressman Bobby L. Rush
Gina McCarthy, EPA OAR
Gwen Keyes Fleming, EPA Region 4

Southeastern Air Pollution Control Program Concerns
Implementation of the National Ambient Air Quality Standard for Sulfur Dioxide
November 21, 2011

Purpose

The purpose of this paper is to express our concerns of the southeastern environmental agencies about the United States Environmental Protection Agency's (EPA's) intended strategy for implementation of the Sulfur Dioxide (SO_2) National Ambient Air Quality Standard (NAAQS) and to provide recommended actions for EPA that would resolve the concerns. The agencies recognize their responsibility for protecting human health and the environment. They have a solid record of doing so, as evidenced by consistent improvement of air quality in the Southeast and the significant resources that are dedicated to this effort. That commitment continues, supplemented by the necessity to manage wisely the limited resources of the agencies and to work with EPA to ensure that procedures and deadlines it mandates are legally and technically sound as well as practically achievable.

The southeastern agencies have previously communicated these concerns to EPA in face-to-face meetings and letters and through participation in conference calls and workgroups. However, as of this date, EPA has not adequately addressed our concerns, but is, instead, continuing to follow its original course of action. EPA's intended strategy is inconsistent with Congress' intent for implementation of the Clean Air Act (CAA), was not developed transparently by allowing input from the state regulatory agencies in the development process, results in conflicts with the compliance timeframes of other regulatory programs for reducing SO_2 emissions, gives inadequate consideration to the costs it would impose on state regulatory agencies, is not technically feasible within the limited time available for states with a significant number of existing SO_2 stationary sources, and provides no opportunity for due process until after EPA has formally disapproved a state implementation plan (SIP).

Background

On June 2, 2010, EPA finalized a revised, more stringent, SO_2 NAAQS[1] that includes a shorter 1-hour averaging period. Within three years of promulgation of a revised NAAQS, CAA Section 110(a)(1) requires states to submit revisions to their SIPs to affirm agency capability to implementation, maintain, and enforce the standard. The deadline for states to submit the SO_2 SIPs is June 2, 2013. CAA Section 110(a)(1) SIPs are called ''maintenance'' or ''infrastructure'' SIPs.[2]

Because the SO_2 NAAQS has existed for many years, states have a long history of effectively regulating SO_2 emissions and already have robust SO_2 regulatory provisions in their state rules and federally-approved SIPs. According to EPA, annual SO_2 emissions have declined 61% since 1990 and annual average SO_2 ambient concentrations have declined 65% from 1990 to 2009.[3]

[1] 75 FR 35520
[2] 75 FR 35553
[3] http://www.epa.gov/airtrends/aqtrends.html

Due to a combination of state and federal programs, these emission reductions and the resulting air quality improvements have continued since 2009 and are projected to continue at approximately the current rate for the next few years, regardless of EPA's implementation strategy for the Section 110(a)(1) SIPs. In light of the experience that states have with the regulation of SO_2 emissions, as well as the clearly demonstrated success the nation has had with reducing SO_2 emissions, the Section 110(a)(1) SIP requirements should be easy to identify and straightforward for states to meet for the revised SO_2 NAAQS.

EPA's Intended Strategy

EPA projected in early 2011 that guidance would be made available "within a few weeks," but there were extensive delays in its release. On September 22, 2011, EPA issued a public review draft which appeared in the *Federal Register* on October 3, 2011.

EPA intends to treat the Section 110(a)(1) SIPs as "substantive attainment SIPs"[4] by requiring the states to demonstrate through refined dispersion modeling or similar techniques that there are no sources in the entire state that could cause or contribute to a violation of the SO_2 NAAQS based on a source's maximum allowable emissions, or potential to emit, regardless of the actual size of the source or actual emissions. EPA does not intend to allow states to take credit for pollution controls unless they are accompanied by federally-enforceable emission limits for time periods of one hour or less.[5] For example, coal-fired power plants and industrial boilers with scrubbers and associated emission limits required by their permits or required by federal regulation would not be allowed to take credit for those pollution controls unless they first received federally-enforceable emission limits on a 1-hour basis, or less. The use of Section 110(a)(1) for these new purposes has significant consequences and is a substantial departure from historic EPA policy and practice, deviates from the intent of the CAA, and creates unacceptable complications including deadlines that the agencies likely cannot meet.

EPA expects states to conduct all of this technical analysis, negotiate with sources federally-enforceable permit emission limits for all SO_2 emission rates used in the model, and prepare SIPs that go through public notice and comment, by June 2013. EPA expects the federally-enforceable emission limits to have a compliance date of August 2017. Delays in informing the states of EPA's requirements will make it difficult if not impossible to complete the SIPs by the June 2013 deadline. The consequences to the states for failing to comply with EPA's intended strategy may include, but are not limited to, any combination of SIP disapproval, redesignation to nonattainment, and promulgation of a Federal Implementation Plan (FIP).[6] Moreover, contrary to longstanding policy, EPA has stated that it intends to require modeling, not actual ambient monitoring data, to make nonattainment designations. Modeling may be necessary and appropriate in some cases to determine specific source contributions and impact to SO_2 monitored ambient concentrations, but such modeling should not be used to designate an area as a nonattainment area.

Concerns with EPA's Intended Strategy

[4] 75 FR 35553

[5] SO_2 Implementation Guidance, pages 17 and 21

[6] 75 FR 35577

Inconsistency with the Clean Air Act

EPA's intended strategy is not consistent with Congress' intent for implementation of the CAA. EPA's statements that states must follow federal guidance and the subsequent delays in the release of that guidance have placed states in a position where there is not enough time to satisfy the guidance that was recently proposed but has not been finalized. If states fail to submit the SIPs on time, or submit the SIPs but fail to satisfy the guidance, EPA could use authority under Sections 110(c) and 110(k) to disapprove a state's SIP and immediately impose a FIP. This is what EPA did in order to justify the federal Cross-State Air Pollution Rule (CSAPR). This is not consistent with Congress' intent for implementation of the CAA as established in Section 101(a)(3).[7]

EPA's intended strategy to use modeling to make nonattainment designations is unprecedented and is a significant departure from historical practice. Only actual ambient air quality data should be used for that purpose. Again, modeling may be necessary and appropriate in some cases to determine specific source contributions and impact to SO_2 monitored ambient concentrations, but such modeling should not be used to designate an area as a nonattainment area.

EPA's intended strategy to require statewide refined dispersion modeling accompanied by federally-enforceable control measures and emission limits in the Section 110(a)(1) SIPs is also unprecedented and is a significant departure from historical practice. Even as recently as 1998, after EPA revised the NAAQS for particulate matter and ozone, EPA affirmed the "required section 110(a) SIP elements are general information and authorities that constitute the 'infrastructure' of the air quality management program, much of which has been in place since the initial SIPs were submitted in response to the Act of 1970."[8] This is the correct interpretation of the CAA.

Under EPA's new approach, the requirements for areas designated attainment or unclassifiable under the SO_2 NAAQS are more stringent than the requirements imposed by the CAA on areas designated nonattainment. For example, the date by which a state must submit a SIP to EPA could be more than 20 months sooner for the areas designated attainment or unclassifiable compared to the deadline for the areas designated nonattainment even though the requirements are substantively the same and areas subject to confirmed poor air quality should be of highest priority. Areas classified as nonattainment have a deadline to submit a SIP demonstrating compliance with the standard within 18 months after the effective date of the designations.[9] Designations could be effective in August 2013, or later if EPA delays making the designations. The CAA requires designations within two years of promulgation of a new NAAQS, but it also allows EPA up to one additional year to complete

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[7] *"The Congress finds that air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of states and local governments."*

[8] Shaver, Sally L., Director, EPA Air Quality Strategies and Standards Division, Memorandum to Air Division Directors, Re-issue of the Early Planning Guidance for the Revised Ozone and Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS) (Apr. 15 - Rev. June 12, 1998)

[9] Clean Air Act Section 191(a)

the designation process if the agency determines that there is insufficient data available. It is not uncommon for EPA to be late making these designations. Therefore, the SIPs could be due in February 2015, or later. However, under EPA's current proposal to use Section 110(a)(1), states with areas classified as attainment or unclassifiable have a deadline to submit SIPs by June 2013.[10]

Another way that EPA's Section 110(a)(1) requirements for areas designated attainment or unclassifiable are more stringent than the requirements imposed by the CAA on nonattainment areas is that the compliance deadline for areas designated attainment or unclassifiable will likely be significantly sooner than the compliance deadline for areas designated nonattainment. Areas classified as nonattainment have a deadline for compliance that is five years after the date that the nonattainment designations are effective.[11] Areas classified as attainment or unclassifiable have no specific compliance deadline in the CAA. Nonetheless, EPA has made it clear that it is presuming such areas will have a compliance deadline of August 2017 because that is the presumed compliance deadline for areas that will be designated nonattainment. As stated above, the 110(a)(1) infrastructure SIPs are due in June 2013. However, it is possible that states will not know what the compliance deadline is for nonattainment areas until June 2013, or later. Therefore, it may be difficult if not impossible for states and sources to know what the compliance deadline actually is at the time the decisions have to be made regarding the deadline for federally-enforceable pollution controls and emission limits to take effect. Congress could not possibly have intended such an outcome when it wrote the CAA.

Lack of Transparency

EPA's intended strategy was not developed transparently with a timely public notice and comment process. The use of dispersion modeling in support of these SIPs was not discussed as part of the SO_2 NAAQS proposal and appears for the first time in the preamble to the final SO_2 NAAQS; thus, the southeastern states did not have an opportunity to provide input on approaches to implementing the new SO_2 standard. From June 2010 when the SO_2 NAAQS was finalized until September 2011, EPA did not provide a public comment opportunity on its intended strategy. Only with the recent release of the draft guidance has EPA offered the opportunity for comment but, even now, the process that EPA is using does not require it to respond to any input received during the comment period.

Conflict with Other Programs

EPA's intended strategy conflicts with other regulatory programs for reducing SO_2 emissions. EPA expects states to negotiate with sources federally-enforceable permit emission limits for all SO_2 emission rates used in the model by June 2013. Since the SIP must go through public notice and comment prior to submittal to EPA, this means that the decisions on pollution controls and emission rates must be made no later than February 2013. Many of the sources that are likely to be impacted by the modeling requirements of Section

[10] Clean Air Act Section 110(a)(1)
[11] Clean Air Act Section 192(a)

110(a)(1) SIPs are the same sources that are impacted by the Utility MACT[12] and the Industrial Boiler MACT[13]. However, the Utility MACT and Industrial Boiler MACT are not yet final and may not be for many months. Even when they do become final, the corresponding compliance dates will be up to four years after the date of promulgation. These sources may not be in a position to negotiate new permit limits prior to February 2013 because they may not have had a chance to finalize their compliance strategies for the Utility MACT or Industrial Boiler MACT at that time.

In addition, the Utility MACT and Industrial Boiler MACT are not expected to establish 1-hour SO_2 emission limits. Therefore, sources intending to install controls to comply with the Utility MACT or Industrial Boiler MACT are unlikely to know how those controls will impact their SO_2 emissions on a 1-hour basis prior to February 2013. Furthermore, without federally-enforceable emission limitations for SO_2 pursuant to the Utility MACT or Industrial Boiler MACT, states may not have the regulatory authority to establish more stringent, unit-specific emission limitations.

Cost Obligations on States

EPA has given no evidence that it has adequately quantified the costs its intended strategy would impose on state regulatory agencies. For example, in the Final Regulatory Impact Analysis for the SO_2 NAAQS, EPA states on page 6-2:

> *"Because we are uncertain of the specific actions that State Agencies will take to design State Implementation Plans to meet the revised standard, we do not estimate the costs that government agencies may incur to implement these control strategies."*

EPA has developed the requirements for the design of the SIPs to meet the standard. EPA can estimate these costs and it is critical that EPA does so. Based on what EPA has published in the preamble to the final SO_2 NAAQS and in the draft guidance, the costs for states to develop and submit approvable Section 110(a)(1) SIPs may be extremely high, even if there was adequate time to complete them. These obligations include conducting modeling, reviewing modeling outputs produced by other entities, modifying permits, and developing necessary supporting documentation for the SIPs.

Unrealistic Deadlines

EPA's intended strategy is not technically feasible for states with a significant number of existing SO_2 stationary sources given the limited time available. First of all, there is still uncertainty as to exactly what EPA expects states to include in their Section 110(a)(1) SIPs, making any significant expenditure of resources a potential exercise in futility. Second, the

[12] National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units

[13] National Emission Standards for Hazardous Air Pollutants for Major Source Industrial/Commercial/Institutional Boilers and Process Heaters

SIPs are due June 2013 and the CAA does not provide for any extensions of this deadline. As described throughout this discussion paper, EPA's intended strategy uses as its authority the wrong provisions of the CAA and the resultant obligations are simply too onerous to be completed by the June 2013 deadline. Air pollution control agencies are experts at evaluating the resources it would take to do what EPA is considering and it is clear that this work cannot be completed in states with a significant number of existing SO_2 stationary sources in the limited time available.

Lack of Timely Due Process

Shortly after the SO_2 NAAQS was finalized in June 2010, some states requested EPA to reconsider its plans to require states to do statewide refined dispersion modeling, at least partly because EPA had not provided any advance notice that it was planning to do so. In denying their requests for reconsideration, EPA took the position that it is under no obligation to subject the NAAQS implementation strategy to public notice and comment. Similarly, EPA took the position that it is under no obligation to promulgate regulatory requirements regarding NAAQS implementation and that it may include the SIP expectations in non-binding guidance.[14] This position regarding the public participation requirements for guidance is in direct conflict with the recent decision in the U.S. Court of Appeals, D.C. Circuit, Case No. 10-1056 (*Natural Resources Defense Council v. Environmental Protection Agency*).[15] EPA further took the position that states have no legal right to challenge EPA's SIP expectations until after EPA disapproves a SIP.[16]

Recommendations

There is still an opportunity to ensure successful implementation of this regulatory program if EPA will take the following course of action. EPA could alleviate nearly all of the concerns raised above if it would abandon the plan for "substantive attainment SIPs" requiring statewide refined dispersion modeling and instead allow states to submit 110(a) SIPs which recognize that the required section 110(a) SIP elements are general information and authorities that constitute the "infrastructure" of the air quality management program. As stated before, modeling may be necessary and appropriate in some cases to determine specific source contributions and impact to SO_2 monitored ambient concentrations, but such modeling should not be used to designate an area as a nonattainment area. Only actual ambient air quality data should be used for that purpose.

These recommendations are entirely consistent with the CAA, and would support needed SO_2 reductions, avoid conflicts with other regulatory programs, and lessen the resource burdens on states and potentially affected sources.

EPA should follow the SO_2 NAAQS implementation strategy as described above. However, if EPA insists on maintaining its current course of action, the following steps should be taken by EPA.

[14] 76 FR 4795
[15] http://caselaw.findlaw.com/us-dc-circuit/1573112.html
[16] 76 FR 4795

- EPA should calculate and make available to the public the estimated costs to the states to develop and submit the Section 110(a)(1) SIPs. These cost estimates should include detailed estimates regarding the number and associated costs of modeling runs that will be required and the number and associated costs of permit amendments that will be required to incorporate the modeled emission rates.

- EPA should consider options to reduce the resource burdens on state agencies without sacrificing protection of the environment. These options would allow states to focus their limited resources on the areas with the greatest emissions, on achieving the most environmental improvement, and on protecting the greatest number of people.

    * EPA should allow the use of ambient air monitoring data in appropriate circumstances, particularly when monitoring networks are robust.

    * For existing sources with reliable actual emissions data, EPA should allow the use of short-term actual emissions instead of short-term allowable emissions in the model. People breathe actual pollution, not allowable pollution. EPA already has in place detailed emission tracking regulations for large SO_2 sources. If actual emissions increase in the future, additional modeling can be required at that time.

    * EPA should exempt from the modeling effort existing, low-emitting sources having reliable actual emissions data.

    * EPA should exempt from the modeling effort sources in counties that have very low SO_2 emissions density.

    * For emission units that are subject to regulations such as the Utility MACT or the Industrial Boiler MACT, EPA should allow the states to model an hourly actual emissions profile based on the air pollution controls required by those emissions standards.

    * EPA should only require states to amend permits to impose more stringent SO_2 emission limits where additional emission reductions are necessary beyond what is currently being emitted. In the case where those emission reductions are required by emission regulations with compliance dates prior to the actual attainment date for areas designated as nonattainment under the 2010 SO_2 NAAQS, emission limits beyond those emission regulations provisions should not be required.

- EPA should use the rulemaking process for establishing detailed expectations such as the minimum requirements for the SO_2 Section 110(a)(1) SIPs. This would allow for public notice and comment and due process.

- If EPA insists upon relying on guidance that does not provide due process, EPA should clearly state that the guidance is non-binding on the part of the implementing states, that

other methods may be approvable, and that EPA will base its approvability decision on the language in Section 110(a)(1) and (2) of the CAA.

Summary

In conclusion, EPA should abandon its plan for "substantive attainment SIPs" requiring statewide refined dispersion modeling and instead allow states to submit 110(a) SIPs which recognize that the required section 110(a) SIP elements are general information and authorities that constitute the "infrastructure" of the air quality management program. EPA should not use modeling to designate nonattainment areas. If EPA does not pursue a more reasonable course of action, many states will not be able to complete the Section 110(a) SIPs. EPA has already stated in the *Federal Register* that it is planning "*any combination of SIP disapproval, redesignation to nonattainment, and promulgation of a federal implementation plan (FIP).*"[17] The inevitable litigation and regulatory uncertainty that this would produce would not be in the nation's best interests, either environmentally or economically.

[17] 75 FR 35577