

# LAKE MICHIGAN AIR DIRECTORS CONSORTIUM

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December 1, 2011

Air Docket  
Attention Docket ID No. EPA-HQ-OAR-2010-1059  
Environmental Protection Agency  
Mail Code: 6102T  
1200 Pennsylvania Avenue, SW  
Washington, DC 20460

**Re: Comments on EPA's "Guidance for 1-Hour SO<sub>2</sub> NAAQS SIP Submissions", 76 FR 61098 (October 3, 2011) and 76 FR 66925 (October 28, 2011)**

On behalf of the Lake Michigan Air Directors Consortium (LADCO), we offer the following comments on EPA's draft document entitled "Guidance for 1-Hour SO<sub>2</sub> NAAQS SIP Submissions". These consensus comments supplement individual comment letters from some of the LADCO States.

## **Modeling Protocol**

On July 25, 2011, we submitted our modeling protocol to EPA. The protocol document identifies the procedures that we intend to follow (and will recommend that others follow) in conducting modeling to develop attainment plans for SO<sub>2</sub> for our states. Given the short timeframe that states are faced with for submitting attainment plans (i.e., June 2013 for attainment/unclassifiable areas, and February 2014 for nonattainment areas), we found it necessary to establish modeling procedures which we believe will address actual air quality problems for SO<sub>2</sub>. We continue to believe that the approach described in our protocol document is appropriate, and, furthermore, is consistent with EPA's draft document. Because we cannot wait for EPA to finalize the guidance (or wait for EPA to complete its intended related rulemaking), we will proceed with our modeling approach.

## **Areas of Concern with EPA's Guidance**

**Use of Allowable Emissions in Modeling Demonstrations:** Appendix A clearly states that maximum allowable emissions or federally enforceable emissions limits must be used in the modeling to demonstrate attainment. Using allowable emissions will, however, in some situations produce unrealistic concentration estimates. Use of actual emissions, on the other hand, would identify the most likely air quality problems and would, of course, be consistent with what is measured by air quality monitors.

To ensure that states are devoting resources to addressing real air quality problems, we suggest that EPA consider (as an alternative to modeling allowables) letting states model actuals in attainment/unclassifiable areas. (Further discussion is warranted to determine the appropriate actual emissions level (based on recent historical) emissions to assume in the modeling.) Furthermore, under

this alternative, if the modeling shows no violations, then no SIP revision would be required for those sources or that attainment/unclassifiable area. We recognize that states would still have an obligation to demonstrate maintenance (e.g., by tracking actual emissions, which could be done by reviewing annual emission reports, and remodeling if emissions increase in the future).

In addition, we suggest that EPA explore how to accommodate modeling actuals in nonattainment areas, and whether there would be a need for a SIP revision for sources found to not contribute significantly to any modeled or monitored violation.

This alternative approach would allow states to focus their current SIP responsibilities on real air quality problems, as represented by areas with monitored violations and those with modeled violations (based on actuals).

**Background Concentrations:** Section 8 in Appendix A describes EPA’s recommended approach for estimating the background concentration to be included in a cumulative air quality impacts analysis. Given the extensive modeling workload already being asked for by EPA and the conservativeness of the modeling assumptions, plus EPA’s direction that we focus the attainment demonstration modeling on the larger sources, it seems inappropriate to require states to do any rigorous analyses to address the relatively small contribution represented by the background value. For this reason, we believe that use of a simple, well-supported background value, as documented in our modeling protocol, is reasonable. Specifically, we conducted a weight-of-evidence approach based on multiple monitoring and modeling data analyses to derive a default regional background value. Under our protocol, individual states also have the option to use local data or refined analyses to develop more site-specific values, if they believe that would yield a more appropriate background value. **We recommend that EPA adopt this simpler approach in its final guidance.**

**Attainment Demonstration:** Appendix C contains guidance for states on making a non-modeling technical attainment demonstration for counties that do not have large sources or any sources of SO<sub>2</sub>. We agree that modeling is not needed for every county in a state, but think that EPA could have taken a simpler approach in addressing this issue. That is, from the perspective of the state, the fundamental requirement is to focus the attainment demonstration modeling on areas with larger sources (e.g., those sources with actual annual average emissions of 100 tons per year [tpy] or more). As long as the state can demonstrate attainment for the areas impacted by these sources, then it is reasonable to assume that any other portion of the state is also attainment. There should be no need for any formal demonstration. **We recommend that EPA adopt this simpler approach in its final guidance.**

#### **Items Needing Clarification (with our recommendations)**

**Emissions Threshold:** Page 9 of the draft document states that “**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<sub>2</sub>), and any other source that **we** anticipate to cause or contribute to a violation to determine compliance with the new SO<sub>2</sub> NAAQS.” We offer several comments on this statement (both with respect to nonattainment areas and unclassifiable areas):

- **We recommend that EPA clarify that the first “we” is EPA.**
- We agree that the modeling should focus on areas with larger sources – i.e., sources with actual annual average emissions of 100 tpy or more of SO<sub>2</sub>. Limiting the modeling to these sources will

allow states to use available resources to address the areas which may experience elevated SO<sub>2</sub> concentrations. **We recommend that EPA adopt this emissions threshold as the basis for identifying, at a minimum, the sources to model.**

- EPA should clarify that the 100 tpy threshold is based on actual annual emissions. Page 16 of the draft document clearly suggests that this threshold is based on actual emissions, and page A-4 states that “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”. Also, on page A-6, EPA states that “it may be reasonable to use actual emissions in the screening process.” Other parts of the draft document, however, are unclear on whether the 100 tpy threshold is to be based on actual or allowable emissions. **We recommend that EPA explicitly state throughout the document that the 100 tpy emissions threshold (as the basis for identifying, at a minimum, the sources to model) is based on actual annual emissions.**
- Unless EPA can provide a definitive list of sources that cause or contribute to a violation, or specific, detailed criteria for determining such sources (other than the 100 tpy threshold), the second “we” should be replaced with “the states believe, in their judgment, will”. States have considerable experience with local SO<sub>2</sub> modeling and are in a better position to determine where real problems are likely to occur. **We recommend that EPA make this change in its final guidance.**

Another issue needing clarification concerns the transition from the annual and 24-hour standards to the new one-hour standard. Of particular interest is whether sources with existing SIP limits whose current potential emissions, regardless of the applicable SIP limit, are less than 100 tpy can be removed from the SIP. Although at one time a state may have felt it necessary to include a limit for these sources based on the annual or 24-hour standard, it would seem that such sources are not very important with respect to the 1-hour standard. Many of these sources contain units that are natural gas (with oil backup) combustion boilers that will continue to be subject to the general limits in the state rule, but will not be listed with the site-specific emission limitations. **We recommend that EPA not require these sources to be included in the SIP and, furthermore, allow control requirements put in place for the annual and 24-hour standard to be removed from the SIP.**

**SIP Conditions:** As discussed on page 10 of the draft document, SIPs for unclassifiable areas, just as for nonattainment areas, should include enforceable emissions limitations, timetables for compliance, appropriate testing/reporting to assure compliance, as well as a modeled attainment demonstration. EPA may wish to clarify that these first three elements are the only required SIP conditions and, as such, would be the only items to which future changes would trigger a SIP revision. Also, EPA should allow states to rely on other SIP approved rules (e.g., recordkeeping and reporting), in lieu of site-specific SIP conditions for these elements. **We recommend that EPA make these clarifications in its final guidance. In addition, more explicit guidance is needed on important compliance issues, such as form of the emission limitations, acceptable test methods and procedures, and emission limitation averaging times.**

Most states have an extensive public comment process, which extends the amount of time it takes to complete a rulemaking. Guidance for the above listed topics is important so that states can proceed with the rulemaking process to support timely SIP submittals. Additional concerns related to the issues listed above in bold are:

- Fuel sampling and analysis (coal and oil): **Since some states rely on fuel sampling for compliance determinations, what sampling frequency will be necessary to accommodate the**

**form of the new standard?** For the states that have small coal fired boilers, it is impractical to require daily sampling. In this case, we would encourage EPA to allow the current sampling frequency to suffice whether it is daily, weekly, or monthly.

- General limits: Some states have a rule with general limits for coal and oil combustion. These limits cover a unit not currently listed in the rule and would apply to any new units. **How would a state determine the revised general limits under the new 1 hour SO<sub>2</sub> SIP? They are currently in a lb/mmbtu form. Can that form of the emission limit be retained? If not, then please provide direction to states on this matter.**
- Averaging period: An averaging period that is too short will make it impossible for some sources to comply with the limit or also may not be appropriate for the type of methods used to determine compliance. **If a SIP limit is in the form of pounds per hour, then what averaging period can states use for compliance purposes (example=24-hour)?**
- Flares: **If the emissions from flares are accounted for in the modeled worst case emissions of the process unit, do flares need a unit specific emission limit in the rule?**
- Natural gas units: **Do emissions from natural gas units for sources included in the site-specific modeling need to be included? Do they need to be included in the rulemaking?**

Another concern we wish to note is the apparent requirement that any source included in the attainment modeling must be included in the SIP. On page 17 of the draft document, it states that “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.” If EPA truly intends that all sources including in the modeling must be in the SIP, even if they already have federally enforceable permit conditions limiting their emissions, then we wish to point out the potentially large administrative burden being placed upon states to not only establish appropriate federally enforceable SIP or permit conditions for those sources, but to also continue to deal with those sources pursuant to subsequent SIP revisions anytime a change may be needed in those conditions. For example, the State of Indiana, which is far along with its technical analyses, has found that there are an estimated 73 sources and 585 units that may have to be included with unit-specific emission limits in a state rulemaking and SIP submittal. Indiana expects to establish two to five separate alternatives for approximately 50% of these 585 units within its rulemaking and SIP submittal. The state has to work closely with each affected source to properly evaluate and address each unit properly within the rule and SIP development process. This results in a complex, lengthy, and voluminous rule and SIP development endeavor. Every additional source that is included in this effort expands the work required for of the state.

This requirement, in turn, places a large administrative burden on EPA Regional Offices to approve such (often minor) SIP revisions. As such, this is another very important reason to focus/limit the modeling to sources with actual annual average emissions of 100 tpy or more (see comment under Emissions Threshold above). **We ask EPA to clarify its intentions about the inclusion of SIP requirements for sources that are modeled (and to recognize this as another basis for limiting the modeling to only those sources with actual annual average emissions of 100 tpy or more). In addition, we recommend that EPA acknowledge the large administrative burden being placed upon states, as described in the Indiana example above. There is also a huge cost burden on affected sources. Depending on the compliance demonstration requirements, sources could be subject to additional testing or recordkeeping with no corresponding SO<sub>2</sub> reductions because of the change in the form of the limit.**

**Emissions Inventory:** A required element of a section 110(a)(1) SIP is an attainment emissions inventory. It is not clear if EPA is looking for an inventory consistent with the attainment modeling (e.g., modeled

point sources at the emissions level shown to provide for attainment) or a comprehensive inventory which includes all source sectors (e.g., point, area, mobile, and biogenic) with both growth and control applied to reflect future year (2017) conditions. **We recommend that the required emissions inventory consist of the modeled point source attainment inventory.**

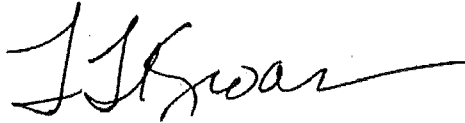
**Attainment Demonstrations:** The SO<sub>2</sub> guidance should allow for weight-of-evidence demonstrations where ambient monitoring data is used in the attainment demonstration. In its “Recommendations to the Clean Air Act Advisory Committee, Air Quality Management Work Group, Phase I and Next Steps”, January 2005, EPA’s work group noted that the current system is top-heavy on modeling for planning purposes and recommended that EPA modify its guidance to promote weight-of-evidence demonstrations. Their recommendation further stated that these demonstrations should reduce reliance on modeling data as the centerpiece for SIP planning, and should increase use of monitoring data and analyses of monitored data. We are encouraged that EPA did recognize in the draft document the value of monitoring data in some situations (e.g., for groups of smaller sources and sources that may not be as conducive to modeling). Another scenario where monitoring data should be given more consideration in the attainment demonstration is an area with a large number of sources, given the small likelihood that all will operate at their maximum short-term emissions simultaneously. **We recommend that EPA provide for a more expansive role in the attainment demonstration for the use of monitoring data, especially where there is an adequate network of SO<sub>2</sub> monitors.**

**Control Strategy:** On page 4 of the draft document, it states that States may rely on existing federal measures (e.g., Title II limits on the sulfur content of fuel used by automobiles and trucks, new source performance standards, national emissions standards for hazardous air pollutants, Title IV reductions for power plants, and the Cross State Air Pollution Rule) in their SO<sub>2</sub> SIPs. On page 19, EPA notes that it expects expeditious attainment will in many cases occur in unclassifiable areas when national and regional control measures are implemented. However, the subsequent discussion of these federal measures on pages 19-23 seems to indicate that states must still establish 1-hour SO<sub>2</sub> emission limits for facilities that have emission limitations from federal measures. This requirement seems contrary to the idea of “relying” on federal measures, as it still requires states to develop an emission limit and, apparently, to incorporate that limit into the SIP. As noted above, on-going maintenance of a large number of facilities with SIP conditions is burdensome for both states and Regional Offices. **We recommend that EPA allow the states to take credit for federal measures without the need to impose additional SIP emission limitations on sources, and construct the discussion on these pages to provide a “how to” approach for demonstrating that federal measures are sufficient for individual sources.**

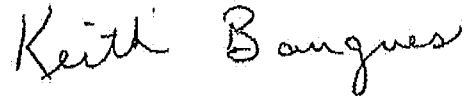
**Contingency Measures:** A required element of a section 110(a)(1) SIP is a contingency plan. On page 24 of the draft document, it states that this plan should consist of “a comprehensive program to identify sources of violations related to the SO<sub>2</sub> NAAQS and to undertake an aggressive follow-up for compliance and enforcement”. We agree that contingency plans do not need to include source-specific emission limitations. Furthermore, we believe that it may be sufficient to rely simply on existing state compliance and enforcement programs to satisfy this requirement. **We recommend that EPA accept existing state compliance and enforcement programs as being sufficient to satisfy the requirement for a contingency plan.**

Please direct any questions concerning these comments to any of us, or Michael Koerber, LADCO.

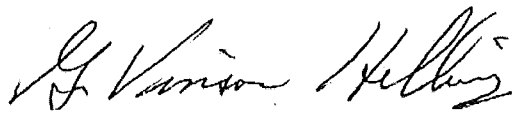
Sincerely,



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