

February 15, 2001

Mr. Eric Ginsburg
U.S. Environmental Protection Agency,
Office of Air Quality Planning and Standards
MD-14
Research Triangle Park, NC 27711

Via E-Mail and First Class Mail

Dear Eric:

On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), thank you for the opportunity to comment on EPA's draft "Guideline Document for Ambient Monitoring of 5-Minute SO₂ Concentrations." Please note that we are limiting our comments to the guideline document, and not addressing the larger issue of EPA's proposed short-term SO₂ intervention level (IL) program. In March 1997, STAPPA and ALAPCO commented on EPA's proposed SO₂ IL program, and will again be submitting comments to EPA pursuant to the January 9, 2001 *Federal Register* notice. The comments below, focusing on the guideline document, are consistent with STAPPA/ALAPCO's 1997 comments (a copy of which is attached).

We have a number of concerns about the practicality of using ambient monitors to measure 5-minute SO₂ levels as outlined in EPA's guidance document. Although initially we believed that these types of short-term levels would typically be associated with facility upset conditions or breakdowns in control equipment, recent data provided to us by the American Lung Association (ALA) suggest that these events may be more prevalent around certain facilities, such as power plants and smelters. However, intermittent (e.g., breakdowns) and non-intermittent SO₂ emissions from single facilities present challenges in the way ambient monitors can be used to detect short-term SO₂ conditions. Since 5-minute concentrations are strongly influenced by meteorology (wind direction, wind speed, stability, etc.), there is no assurance that any prescribed number of monitors around a facility would detect the highest levels in adjacent population neighborhoods. Rather than chasing after a plume, it makes much more sense to address this problem at the source. In-stack continuous monitors can help detect increases in SO₂ emissions. And if fugitive conditions have the potential to cause high SO₂ emissions at ground level, facilities should be required to install SO₂ monitors near perimeters of the facility to detect elevated SO₂ levels before such plumes leave the property.

We are also concerned about the impacts of the proposed monitoring program on state and local agency resources. Redeploying monitors in the existing network to cover specific facilities in an attempt to keep costs down does not recognize the true potential

of need. The guidance is very unclear about how state and local agencies should determine which facilities are prone to 5-minute SO₂ averages over 0.6 ppm, and we are concerned that EPA has greatly underestimated the number of facilities with the potential for such conditions. For example, in Illinois there are many refineries, power plants, and other major sources that could supposedly qualify as a candidate SO₂ facility under certain circumstances. Even if only 10 of these facilities required monitors, that would result in a total of 40 SO₂ monitors – greater than the number of monitoring sites in the entire existing network. Also, we believe this is a conservative estimate; there may be closer to 30 facilities that may warrant monitoring. If you take this scenario multiplied by the number of other state and local agencies with major sources having a “potential” to release high levels of SO₂ under certain circumstances, the result could be an enormous nationwide effort to detect these ambient conditions with staggering resource implications.

Furthermore, we are concerned with provisions in the guideline regarding redeployment of existing SO₂ monitors. Many monitors have NAMS designations that are needed to maintain long-term trends. These monitors are not likely to be available for redeployment because of the importance of continuing these trend sites. If EPA would consider revising the NAMS requirements, and if state and local agencies would be able to reduce that network substantially, this would only release a limited number of monitors for redeployment. Given the magnitude of monitors needed for the short-term SO₂ program, we do not believe a redeployment approach is a viable option.

We believe that if EPA requires ambient SO₂ monitoring, the facilities of concern should be responsible for establishing, maintaining, and ensuring independent auditing and reporting of such data to the state and local agencies for review. Since these conditions are facility-related, facilities should be required to bear the expense of this program, not the state and local agencies that are already strapped for funds in order to maintain existing air monitoring programs.

In addition to our general concerns with the guideline, we have the following specific comments:

Identification of Sources

As mentioned above, the draft guideline is not clear about how sources would be identified. Because information needs to account for equipment malfunctions, breakdowns, process upsets and other unique conditions, virtually any source of SO₂ could be considered as having a “potential” to cause high 5-minute SO₂ levels. A scenario, for example, where a natural gas curtailment period would force major industries, currently on natural gas, to use fuel oil could open up a host of facilities to a “potential” for high 5-minute levels. While EPA indicates that there are relatively few facilities nationally that could exceed the intervention levels, the guideline does not contain enough useful information to help determine what is or isn’t a facility with a “potential” for high 5-minute levels.

Monitors

It is also unclear why there is a presumption that four SO₂ monitors would be needed for each facility identified. Why not six or eight? While models may indicate where the most likely location for elevated SO₂ might be, that does not necessarily mean that a monitor can be placed there. This becomes even more problematic in residential areas, where good monitoring locations are often hard to find. What is the basis for EPA's presumption that on any given day, the wind and meteorology would be favorable to have the high readings occur at any one of the four locations? Has EPA done any studies to show how successful this effort would be? We believe that arbitrarily prescribing a number of monitors to a given location may not indicate an exceedance of 0.6 ppm SO₂ for a 5-minute average when an exceedance actually occurs at a location where there is no monitor.

In summary, we offer the following recommendations:

- (1) EPA should fund a pilot study to determine the feasibility of using ambient monitoring for short-term SO₂ purposes. In such a pilot study, we recommend that modeling be conducted to delineate areas of maximum SO₂ impacts. We suggest approximately 10 SO₂ monitors could be utilized to cover impacted areas in all four quadrants (four sites) and augmented by six sites radially (six interquadrant sites) and distance-wise (closer and farther than predicted maximum impacted sites.) The pilot study should also include continuous stack monitors. Results of such a study should substantially improve our understanding of the usefulness of ambient monitoring in detecting short-term SO₂ excursions. STAPPA and ALAPCO would be willing to assist in the selection, design, and review of such a study.
- (2) Based on the results of the pilot study, EPA should consider the viability of using continuous stack monitoring for determinations of ground-level SO₂ potential or, if it is demonstrated that ambient monitoring is an effective approach, that facilities be required to conduct the requisite modeling and monitoring to site appropriate locations.

We hope these comments are helpful, and we appreciate your giving us this opportunity to provide them. If you have any questions, please contact either of us, or Geri O'Sullivan of STAPPA/ALAPCO.

Sincerely,

Nancy L. Seidman
STAPPA Chair
Monitoring Committee

Mel Zeldin
ALAPCO Chair
Monitoring Committee