

February 8, 2010

Lisa P. Jackson, Administrator  
U.S. Environmental Protection Agency  
Mail Code 6102 T  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
*Attention: Docket ID No. EPA-HQ-OAR-2007-0352*

*Re: Primary National Ambient Air Quality Standard for Sulfur Dioxide -- Proposed Rule*

Dear Administrator Jackson:

The Northeast States for Coordinated Air Use Management (NESCAUM) are pleased to offer the following comments on the U.S. Environmental Protection Agency's (EPA's) Notice of Proposed Rulemaking (NPR), published on December 8, 2009 in the Federal Register, entitled *Primary National Ambient Air Quality Standard for Sulfur Dioxide* (74 FR 64810-64881). NESCAUM is the regional association of air pollution control agencies representing Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

Since the last National Ambient Air Quality Standard (NAAQS) review for sulfur dioxide (SO<sub>2</sub>), controlled human exposure studies and epidemiologic data have strongly supported the need for a short-term SO<sub>2</sub> standard and suggest that the current annual and 24-hour standards are not protective of public health. Furthermore, short-term SO<sub>2</sub> exposures (i.e., five minutes to 24 hours) have been linked to lung function decrements, respiratory symptoms, hospital admissions and emergency department visits. In light of this evidence, the EPA Administrator and the Clean Air Scientific Advisory Committee (CASAC) have recognized that the current annual standard does not appear to protect public health with an adequate margin of safety, particularly for asthmatics, and that there is a need for a short-term SO<sub>2</sub> standard.

NESCAUM agrees with the EPA Administrator and the CASAC that available health studies support the establishment of a short-term primary SO<sub>2</sub> NAAQS. Furthermore, NESCAUM agrees with the EPA Administrator and the CASAC determinations that the proposed one-hour SO<sub>2</sub> standard be established in the range of 50-100 ppb in order to adequately protect the public health.

More detailed comments are found in the sections that follow.

## **1. Primary SO<sub>2</sub> Standard**

### *a. Level*

NESCAUM agrees with the EPA Administrator and the CASAC determinations that the current 24-hour and annual SO<sub>2</sub> NAAQS should be revoked. Furthermore, NESCAUM agrees that a short-term NAAQS is necessary to protect public health, and the proposed one-hour standard in the range of 50-100 ppb is appropriate to protect public health (74 FR 64845). A short-term standard for SO<sub>2</sub> is imperative, since an annual or 24-hour standard is limited in its ability to protect sensitive populations (e.g., asthmatics) from short-term peak concentrations. Additionally, a short-term standard would help to protect the public health in areas near stationary sources that emit SO<sub>2</sub> and it would be helpful in permitting and managing stationary source start-ups and shut-downs.

NESCAUM also strongly agrees with the EPA Administrator and the CASAC that a level of 150 ppb for the proposed one-hour SO<sub>2</sub> standard is inappropriate and does not protect the public health.

### *b. Form of the SO<sub>2</sub> Standard*

For the new one-hour SO<sub>2</sub> NAAQS, NESCAUM supports EPA's proposal to set the form of the standard as the 99<sup>th</sup> percentile design values averaged over three years (74 FR 64845). NESCAUM is concerned, however, that the proposed form would allow for large concentrations to occur over multiple hours within one day. Large concentrations that occur over multiple hours within one day may increase the opportunity of exposure for any one individual, in addition to potentially increasing duration of exposure for sensitive populations. The proposed rule does not appear to directly address these issues. For example, does the sensitivity of asthmatics to SO<sub>2</sub> increase with repeated exposures over a 24-hour period? If the answer is yes or likely, then having a 24-hour standard that could reduce either the frequency or intensity of repeated SO<sub>2</sub> exposures to levels below the one-hour standard would be beneficial. In order to address this issue, NESCAUM urges EPA to consider establishing a new 24-hour standard, not to be exceeded (i.e., one exceedance constitutes a violation), in addition to the one-hour standard (99<sup>th</sup> percentile), to help assure that SO<sub>2</sub> peaks are not extreme and do not extend over multiple hours within a day. NESCAUM also urges EPA to examine how the form and level of a 24-hour standard could be protective of multiple exceedances of the one-hour standard within one day.

## **2. Funding**

The NESCAUM states are extremely concerned about the costs associated with deploying and running the proposed monitoring network. Single monitor SO<sub>2</sub> source-oriented sites will be very expensive to deploy and operate, and our assessment is that the associated costs will be at least 30% to 40% higher than EPA's estimates. Furthermore, states may not be able to deploy such a labor intensive network, even if funded with Clean Air Act Section 103 funds. Hiring freezes

and staff layoffs have taken effect in many states, and prevent states' ability to expand, or in some cases maintain, monitoring staff.

Moreover, the NESCAUM states are concerned that, with this proposal and the recently issued final NAAQS rule for nitrogen dioxide, EPA has significantly changed the goal of its monitoring program from ambient to source-oriented monitoring. While source-oriented monitoring will yield data that could inform policy decisions in the next NAAQS review, it should not be solely up to the states to shoulder this type of research effort.

We urge EPA to consider these issues as it finalizes the SO<sub>2</sub> monitoring network requirements. We need a practical and workable solution to monitoring that meets our mutual goals of maximizing public health protection, yielding needed data, and not overburdening the states. Some of the options EPA should consider include: a targeted ambient monitoring network; a source-oriented component; alternative funding sources; and use of contractors with EPA funding.

### **3. Monitoring**

#### *a. Source-Oriented Components of the Proposed Monitoring Network*

The NESCAUM states support EPA's proposed two prong network design approach of a Core Based Statistical Area (CBSA) hotspot monitoring concept, along with a state emissions triggered monitoring requirement (74 FR 64851). We also support EPA's preferred monitor placement and siting option (74 FR 64854), which does not specifically regulate the process by which SO<sub>2</sub> hotspots are identified by the states. Our support for any hotspot monitoring, however, is contingent on the addition of a clause that would allow for the removal (not relocation) of a source-oriented monitor after three years if the design value is less than 50% of the standard. Under this scenario, we would support a minimum number of sites within a state, based on the state emissions triggered monitor count as proposed by EPA.

#### *b. Population Weighted Emissions Index (PWEI) CBSA Siting Approach*

The NESCAUM states do not support the proposed PWEI approach to CBSA hotspot monitoring requirements (74 FR 64851), because it can result in multiple monitors in large cities that have relatively small CBSA SO<sub>2</sub> emissions, or no monitor in a CBSA with large emissions. An example of this is that, under this approach, Hartford, CT, which has no large SO<sub>2</sub> sources and emissions of 8,800 tons per year (tpy), and Philadelphia/Camden, with 110,000 tpy, would be required to have two PWEI-required monitors; Coshocton, OH, with 107,000 tpy, would not be required to have any CBSA monitors. This approach does not yield EPA's intended results, and would result in unnecessary costs without commensurate need.

We recommend that EPA adopt an emissions-only approach, resulting in fewer CBSA monitors. We suggest a threshold of 50,000 tpy CBSA SO<sub>2</sub> emissions to trigger the first CBSA monitor,

and a second CBSA monitor required when emissions exceed 200,000 tpy. CBSAs with emissions under these thresholds could be monitored under the state emissions triggered prong.

*c. Emissions Driven Monitoring*

For any SO<sub>2</sub> monitoring driven by emissions inventories, states should be able to use the best available and most up-to-date emissions information, based on the most recently available stack monitoring data. EPA should not require states to rely solely on EPA's inventories, such as the National Emissions Inventory (NEI), as they do not always have the updated information that is necessary for such regulatory decisions.

We do not support EPA's proposed requirement that any PWEI- or CBSA-triggered monitors "shall not count toward satisfying any required monitors resulting from the state emissions triggered requirements" (74 FR 64880). Additional SO<sub>2</sub> monitors should only be required if the CBSA-triggered monitor count is less than the state emissions triggered count.

We further recommend that states with an approved SO<sub>2</sub> inventory of less than 0.1% of the national inventory be exempted from the hotspot siting requirement, and that the required monitor be sited at the state's discretion. With a state inventory at such a low level, there would not likely be any large SO<sub>2</sub> sources and thus no significant hotspots. It therefore makes more sense for states to have discretion in these situations to choose a site better suited for monitoring potential public exposure.

*d. Other Monitoring Related Issues*

Interstate Monitoring: We have concerns regarding CBSA-source related interstate monitoring in cases where the hotspot from a source in state A is in state B. Presumably, the EPA Regional Administrator would resolve such an issue when both states are in the same EPA region. EPA, however, also must establish a process on how this issue would be resolved when states in different EPA regions are involved in a single CBSA.

Five-Minute Reporting Requirement: The proposed five-minute data reporting requirement presents resource issues for some states for field data collection and data validation. Some states validate at the one-hour level. Reporting five-minute data would also require validation at the five-minute level, thus requiring more effort. We support EPA's use of a block five-minute average one-hour maximum instead of the alternative rolling five-minute maximum metric, as a rolling approach would require validation at the one-minute level.

*e. Other Monitoring-Related Recommendations*

Collect Wind Data: If a source-oriented site has or is expected to have SO<sub>2</sub> levels at 75% or more of the NAAQS, we recommend that five-minute wind data also be collected at the site. While ideally all source-oriented sites should have five-minute wind data, this may be

burdensome on air agencies. Therefore, this approach would be economical while providing critical data.

Proposed FRM Requirements: We request that EPA tighten the NO interference metric for the new SO<sub>2</sub> Federal Reference Method from 100 to 300 to 1. The proposed value of 100 results in substantial NO interference at sites with low SO<sub>2</sub> levels in urban areas, such as NCORE sites (see Table B-1.4 and Table B-3, Nitric oxide).

*f. Correction*

Table B1, line 2 (noise) for CO (50 ppm) is incorrect (see 74 FR 64877). We assume that the intended number is 0.5 ppm

#### **4. Public Health Messaging**

NESCAUM commends EPA on its proposal to revise the Air Quality Index (AQI) concurrently with the SO<sub>2</sub> NAAQS. NESCAUM has some questions regarding how EPA envisions reporting and forecasting SO<sub>2</sub> concentrations for the AQI using source-oriented monitors. For example, how does EPA expect geographic regions to be delineated, given the more localized nature of a source-oriented network? Moreover, NESCAUM has some overarching concerns about the AQI. In a February 8, 2007 letter to EPA, NESCAUM indicated that it is time for EPA to undertake a substantial review of the AQI and its methodologies in light of its more recent uses and the newer controlling forms of daily and hourly NAAQS. While the AQI worked well for its earlier usages (e.g., presenting air quality data from the previous day and making general forecasts), it is not well designed for its current uses (e.g., addressing real-time exposures with additional messaging at lower levels approaching the standard). NESCAUM therefore urges that EPA work with the states to revisit and overhaul the AQI in light of the multiple purposes it now serves, including: adjusting the AQI to reflect shorter averaging times; accounting for multi-pollutant (i.e., cumulative) impacts; and considering additional contaminants. By so doing, public health protection would be better served.

#### **5. Antibacksliding**

EPA proposes that a nonattainment designation and subsequent requirements under the current SO<sub>2</sub> NAAQS remain in effect until the nonattainment area submits, and EPA approves, a State Implementation Plan for the new SO<sub>2</sub> NAAQS (74 FR 64864). NESCAUM supports this approach, as it maintains the needed public health protection and regulatory coverage until a new and workable SO<sub>2</sub> reduction plan is in place.

#### **6. Nonattainment Designations and Data**

In the proposal, EPA discusses the data on which it will rely to determine nonattainment designations (74 FR 64859). The NESCAUM states recommend that EPA allow modeling to be

used in conjunction with monitoring data to better determine nonattainment areas. The intent is to obviate the need for states to install monitors at great cost where concentrations of SO<sub>2</sub> are just a small fraction of the NAAQS, and to ensure that areas can be designated nonattainment in those cases where robust monitoring data are lacking.

If you or your staff has any questions regarding the issues raised in these comments, please contact Leah Weiss of NESCAUM at 617-259-2094. In addition, we would appreciate the opportunity to discuss with you in greater detail NESCAUM's concerns and recommendations with respect to revising the AQI.

Sincerely,



Arthur N. Marin  
Executive Director

Cc: NESCAUM Directors  
Lydia Wegman, EPA/OAQPS  
Michael J. Stewart, EPA/OAQPS  
David Conroy, EPA Region 1  
William S. Baker, EPA, Region 2