AMERICAN LUNG ASSOCIATION®
Fighting for Air

Albert A. Rizzo, M.D.
Chair
National Board of Directors

Ross P. Lanzafame, Esq.
Chair-Elect
National Board of Directors

H. James Gooden
Past-Chair

Christine L. Bryant
Secretary/Treasurer

Geri Reinardy, M.P.A.
Speaker
Nationwide Assembly

Marcia D. Williams, Ed.D.
Speaker-Elect
Nationwide Assembly

NATIONAL HEADQUARTERS

Charles D. Connor
President &
Chief Executive Officer

1301 Pennsylvania Ave., NW
Suite 800
Washington, DC 20004-1725
Phone: (202) 785-3355
Fax: (202) 452-1805

14 Wall St.
Suite 8C
New York, NY 10005-2113
Phone: (212) 315-8700
Fax: (212) 608-3219

www.LungUSA.org

June 29, 2012

Administrator Lisa P. Jackson
U.S. Environmental Protection Agency
Mail Code 6102T
1200 Pennsylvania Avenue,
Washington, DC 20460

RE: Comments concerning EPA's Implementation of the 1-Hour SO_2 NAAQS, Docket ID No. EPA-HQ-OAR-2010-1059

Dear Administrator:

The American Lung Association appreciates the opportunity to comment on the EPA's Implementation of the one-hour sulfur dioxide national ambient air quality standard (SO_2 NAAQS).

The American Lung Association has long been concerned with the threats to health from elevated, but brief exposures to SO_2. Threats to lung health, and particularly the health of people with asthma, have been recognized for years, both in research and in legal rulings. The Lung Association won a challenge against EPA in the D.C. Circuit Court in 1998 (*American Lung Association v Browner*, No. 96-1251 [D.C. Circuit]), when the Court remanded the case to EPA to reconsider the short-term (5-minute) standard. When EPA proposed the 1-hour standard in 2009, we applauded the decision to revise the standard for the first time since 1971. We urged EPA to set a much more protective standard than EPA finally chose. We now urge EPA to provide firm guidance.

Many people face harm from sulfur dioxide at levels currently seen.

Many people face increased susceptibility to the dangers from SO_2. Children, the elderly and people with asthma are most at risk. These groups include millions of people. For example, there are an estimated 25.7 million people, including 7.0 million children, with asthma in the U.S.[1]

Sulfur dioxide causes a range of harmful effects on the lungs, including:

- Bronchoconstriction, a narrowing of the airways that causes difficulty breathing;
- Increased asthma symptoms;
- Increased visits to emergency departments for breathing problems; and
- Increased hospital admissions for respiratory illnesses. [2]

The research provided strong evidence to conclude that short-term exposures ranging from 5 minutes to 24-hours to sulfur dioxide caused respiratory harm, including decrements in lung function among asthmatics, bronchoconstriction, increased risk of hospitalization and emergency treatment.[3] In addition, sulfur dioxide forms sulfates, a widespread fine particulate matter. EPA estimates that reducing sulfur dioxide will provide the co-benefit of reduced particulate matter that will prevent 2,300 to 5,900 premature deaths a year in 2020.[4]

The standard adopted in 2010 provided the first ever protection against these dangerous spikes in exposures despite strong evidence of the need for such protection in the 1990s and earlier. To adequately protect public health as the Clean Air Act requires, EPA must move quickly to implement this standard.

The American Lung Association urges EPA to fully incorporate modeling in the determining attainment and nonattainment areas. Based on existing information, approximately 90 percent of short-term SO_2 emissions of concern may come from large sources, especially coal-fired power plants. EPA should evaluate the SO_2 NAAQS compliance in areas affected by these sources using modeling data to reach attainment and nonattainment designations. For locations of concern where modeling data are lacking, EPA should seek out available modeling to expedite the process.

The monitoring network for SO_2 is much too small and the sources too complex to adequately recognize violations of a one-hour standard.

The nation currently has far too few sulfur dioxide monitors—fewer than 500, according to EPA's January 2012 list of monitors.[5] EPA's inventory reports 494 sources emitting greater than 1000 tons of SO_2 as of 2008; those sources produced 90 percent of the total SO_2 emissions. The 2008 inventory identified nearly 300 additional sources producing between 100 and 1000 tons of SO_2.[6] Given the need for area source monitors and the existence of so many sources requiring additional monitoring, the existing monitoring network falls far short of providing adequate information and protection for public health. Nor is it likely that Congress or the Administration will fund additional monitors. However, even if more monitors suddenly appeared, the financially-strapped states would not have resources to report and maintain them. Therefore, we agree with the comments EPA received during the review of the SO_2 NAAQS that argued that "the proposed monitoring network was too small and insufficient to cover the range of SO_2 sources, and yet too burdensome and expensive to expand to an adequate scale."[7]

We oppose the suggestions by some that reallocating these monitors is a solution. Reallocating monitors would only create unnecessary delay and even moved, these monitors would still lack scope and number to adequately monitor SO_2 emissions. Time spent selecting a new location for those monitors added to the requirement to collect 3 years of data at that location would then delay the implementation by likely a minimum of 4 years. Furthermore, states would need to base the decision on the new monitor locations using the same information that led them to select the current locations. The only improved way to assess the monitor locations would be through modeling the emissions.

EPA has recognized that monitors are not likely to be capable of assessing short spikes because of the atmospheric chemistry and the diverse areas around major sources and has historically called on modeling as the better solution. As EPA explained in the final 2010 Rule, the requirement of modeling to designate areas as

attainment "has been our general position throughout the history of implementation of the SO_2 NAAQS program."[8] EPA has stated similar conclusions repeatedly over the past decades. We see no evidence that such a conclusion needs rethinking.

For these reasons, EPA should rely primarily on modeling to determine nonattainment areas.

We agree with EPA's conclusion in the Final Rule that "it is more technically appropriate, efficient, and effective to use modeling as the principle means of assessing compliance for medium to large sources."[9] EPA should use modeling as the primary method for determining attainment.

Modeling reduces the burden on states. Modeling is more adaptable, flexible and cheaper than monitoring. The Sierra Club has completed modeling for many of the sources, finding that each model took approximately 4 days to run at a cost of approximately $4,000. We agree that EPA should adopt protocols so that appropriate modeling can provide comparable information across the nation.

Given the evidence of the failure of monitoring to demonstrate accurately the risk from SO_2 in these situations, we do not agree with the comments from some that modeling should not be used because it is likely to overestimate the exposure. The weight of evidence from EPA and the States shows that monitoring for SO_2 seriously underestimates the exposure. Modeling has historically provided accurate information in determining attainment or nonattainment status.

We seek to move forward as rapidly as possible to reach a final decision on these areas and to provide, at last, the recognition that the SO_2 levels in these communities threaten health. For that reason, we support EPA's use of its authority to extend its designations until 2013 where sufficient data are not yet available.

The American Lung Association recommends these approaches:

- Areas with monitoring or modeling showing nonattainment need to be designated nonattainment. If EPA has evidence from either showing nonattainment, the question is resolved.
- Areas with medium or large sources and monitoring data only that shows attainment should be designated unclassifiable—not unclassifiable/attainment, but unclassifiable, with a requirement that modeling be done to determine if it is in attainment or nonattainment. Unclassifiable should only be used until modeling allows EPA to determine the status. Areas should not be left in unclassifiable status.
- Areas where both monitor and modeling data show compliance with the NAAQS should be determined attainment.

We are particularly concerned about areas designated as "unclassifiable." EPA has historically not chosen to issue new nonattainment classifications for areas that were previously "unclassifiable/attainment." EPA usually only changed designations when the states sought to be classified as in attainment or when the standards were strengthened; to our knowledge, no states have voluntarily come forward to request nonattainment because they recognized that the air quality had deteriorated in counties.

That cannot happen with SO_2. We strongly appreciated EPA's intention as expressed in the Final Rule to put more weight on the modeling to allow resolution of these "unclassifiable" areas.

For areas that lack one monitoring data and lack major or medium sources, EPA should take the time to identify and evaluate the other sources that can lead to a violation of the NAAQS. We support EPA convening a meeting of experts who could assist in that evaluation with such a discussion leading to rule-making.

We do not agree with the use of a "population weighting" concept for a priority in modeling. As we have explained, there is no need to construct a complex and time-consuming weighting process to decide which sources to model: the modeling is affordable and implementable in a timely way.

EPA should accept and incorporate modeling data submitted for infrastructure and maintenance SIPs.

We urge EPA to use the highest one-hour facility-wide emission rate from the most recent available year in its modeling. EPA should use potential to emit for sources that do not have accurate measurements of actual emissions for the past year.

We support the use of allowable emissions in modeling. Especially where the exposures are so dangerous even as they are so brief, it is important to recognize that allowable emissions provide a much better approach to assuring that the standard is met and public health protected in future situations. Using allowable emissions is EPA's long-time practice and should be used here.

The American Lung Association urges EPA to move aggressively to finally implement this long overdue standard.

We appreciate the opportunity to discuss these issues and our concerns with EPA as the Agency moves to resolve these questions. We urge EPA to move forward rapidly and to use modeling as the foremost tool in determining nonattainment areas for these large and medium sources.

Sincerely,

Janice E. Nolen
Assistant Vice President
National Policy and Advocacy

---

[1] Centers for Disease Control and Prevention. National Center for Health Statistics. National Health Interview Survey Raw Data, 2010. Analysis performed by American Lung Association Research and Program Services using SPSS and SUDAAN software.

[2] U.S. Environmental Protection Agency. *Integrated Science Assessment for Sulfur Oxides – Health Criteria*, September 2008. EPA/600/R-08/047F.

[3] U.S.EPA, ISA, 2008

[4] U.S. EPA, *Final Regulatory Impact Analysis for Sulfur Dioxide National Ambient Air Quality Standards*. June 2010. Accessed June 29, 2012 at http://www.epa.gov/ttn/ecas/regdata/RIAs/fso2ria100602ch5.pdf.

[5] U.S. EPA. Design Values. Sulfur Dioxide Design Values, last updated January, 2012. Accessed June 29, 2012 at http://www.epa.gov/air/airtrends/values.html.

[6] U.S. EPA. Implementation of the 2010 Primary 1-hour SO2 NAAQS: Draft White Paper for Discussion. May 30, 2012. Available at http://www.epa.gov/airquality/sulfurdioxide/implement.html#outreach.
[7] U.S. EPA. 40 CFR Parts 50, 53, and 58: Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule. June 22, 2010. 75 *Federal Register* 119:35551.
[8] U.S. EPA, Final Rule, 2010.
[9] U.S. EPA, Final Rule, 2010.