



Michael D. Maves, MD, MBA, Executive Vice President, CEO

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Environmental Protection Agency
Mailcode 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

**Re: National Ambient Air Quality Standards for Particulate Matter
[Docket No. EPA-HQ-OAR-2001-0017]**

The American Medical Association (AMA), on behalf of its medical student and physician members, offers the following comments on the Environmental Protection Agency's (EPA) Proposed Rule on National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM). The NAAQS for PM has a central role in the management of air quality in the United States.

Particulate air pollution is a national public health problem. Sources of airborne PM vary across the country, as does the chemical composition and size distribution of PM. Primary particulate emissions come from fugitive road dust, incineration, agriculture, fossil fuel combustion, wind erosion, and other industrial emissions. In promulgating the Proposed Rule, EPA relied on size classifications of "fine" ($<2.5 \mu\text{M}$ in aerodynamic diameter or $\text{PM}_{2.5}$) and "coarse" (range of 2.5 to $10 \mu\text{M}$ or $\text{PM}_{2.5-10}$). We agree that this classification scheme remains valid.

The Clean Air Act directs the EPA to promulgate NAAQS for PM that are "evidence-based and that protect the public health and welfare" with "an adequate margin of safety," regardless of cost. The adequate margin of safety provision addresses uncertainties in scientific and technical information. This approach is intended to prevent (known) harmful pollution levels, while also preventing lower pollutant levels that may pose an unacceptable risk of harm, even if the risk is not precisely identified as to nature or degree. The EPA's task is to establish standards that are neither more nor less stringent than necessary for these purposes. Thus, the final NAAQS is a public health policy statement that should be based on scientific information and analyses about health effects and risks, as well as judgments about how to deal with the range of uncertainties that are inherent in these types of analyses.

Following implementation of the 1997 $\text{PM}_{2.5}$ standard, a nationwide monitoring system of this pollutant was implemented. Thus, data on $\text{PM}_{2.5}$ are now available for many parts of the United States starting from 1999 through the present. The average annual $\text{PM}_{2.5}$ in the United States is $13.4 \mu\text{g}/\text{m}^3$ (range 4 to $28 \mu\text{g}/\text{m}^3$).

The new evidence on harmful effects of PM is substantial. PM has been linked to a broad range of adverse health effects, both respiratory and cardiovascular, in epidemiologic and toxicologic research. Studies of daily variation in concentrations and national level time-series analyses have linked PM with increased morbidity and mortality. Many U.S. and Canadian studies are available that provide evidence of associations between PM_{2.5} and serious health effects in areas with air quality at and above the level of the 1997 annual standard (15 µg/m³). Newer short-term mortality studies provide evidence of statistically significant associations with PM_{2.5} in areas with long-term average concentrations of 13 to 14 µg/m³, concentrations that are below the 1997 standard. Short-term studies of emergency room visits and cardiovascular mortality suggest measurable health effects at PM_{2.5} concentrations of ~12 µg/m³. A recent study (Dominici F, Peng D, Bell ML et al. *JAMA*; 2006; 295:1127-1134) showed that PM_{2.5} concentrations are associated with short-term increases in hospital admissions for cardiovascular and respiratory diseases among Medicare enrollees, arguing for setting a PM_{2.5} standard that is adequate to protect the health of these individuals.

The AMA supports the recommendations of EPA staff and the Clean Air Scientific Advisory Committee to EPA for more stringent air quality standards. In fact, several physician organizations, including the American Thoracic Society, American College of Cardiology, American College of Preventive Medicine, and the American Academy of Pediatrics, support a more stringent PM_{2.5} standard of 12 µg/m³ for the average annual standard; 25 µg/m³ for the 24-hour standard; and use of the 99th percentile form for compliance determination. The AMA believes the Administrator should adopt these more stringent standards in order to provide adequate protection for the public from the adverse health effects of both long- and short-term exposures to fine particulate matter in the ambient air.

While not commenting specifically on the proposed new coarse PM standard, the AMA is concerned that the EPA is proposing no monitors in communities with a population less than 100,000 and in rural areas. Although there are limited data on the health effects of coarse particles derived from these areas, monitoring should not be stopped altogether. Continued monitoring of this class of particulate matter will allow future studies of their possible health effects to be conducted.

In conclusion, the AMA supports more stringent standards for PM_{2.5} comprised of 12 µg/m³ for the average annual standard; 25 µg/m³ for the 24-hour standard; and use of the 99th percentile form for compliance determination, as well as the continued monitoring of coarse particle concentrations in rural areas. Thank you for considering our views.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Maves", written over a thin red horizontal line.

Michael D. Maves, MD, MBA