

Administrator Stephen L. Johnson
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

December 5, 2005

Dear Administrator Johnson:

Please find attached a letter signed by over one hundred prominent environmental health researchers and physicians urging you to set the new $PM_{2.5}$ standards at $12 \mu\text{g}/\text{m}^3$ for the annual standard and $25 \mu\text{g}/\text{m}^3$ for the 24 hour standard. The letter also calls for a stringent coarse particulate matter ($PM_{2.5-10}$) standard to be applied nationally.

I believe the outstanding support for this letter shows the strong feeling among the public health and medical communities that the current annual and daily standard for fine particulate matter are inadequate to protect public health. It also indicates just how convincing the current scientific base is for lowering the standards to the levels listed above. As you know, academic researchers and physicians are generally reluctant to commit to specific policy recommendations in letters such as these. The number and prominence of these signers could not be a clearer sign for you of the strong support among those most familiar with the health effects of air pollution for strong, truly protective standards. As your own Staff Paper shows, less restrictive standards will result in thousands of preventable deaths around the country each year.

In particular, I call your attention to the papers reviewed in the Criteria Document that examined the Dose-Response relationship between daily deaths and particulate matter. Whether measured as PM_{10} , black smoke, or $PM_{2.5}$, no sign of a threshold was seen down to levels of a few $\mu\text{g}/\text{m}^3$. These studies make it clear that this is not a problem of a few high days, and the finding of a linear Dose-Response indicates that lowering the annual average is key to improving public health. In addition, we have just had a followup of the Six City Cohort Study accepted that shows that changes in annual average $PM_{2.5}$ are associated with changes in mortality risk, and these changes include drops well below the current annual average standard of $10 \mu\text{g}/\text{m}^3$. So I urge you to follow the CASAC recommendation that the annual average standard must be reduced.

I hope you will heed this clear signal coming from members of the academic and medical communities and follow the strong science on particulate health effects in arriving at your decision for the new standards.

Sincerely,

Joel Schwartz

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Administrator Stephen L. Johnson
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December 5, 2005

Dear Administrator Johnson:

As doctors, scientists, and public health professionals, we are writing to urge you to act on the recommendations of your staff and the Clean Air Scientific Advisory Committee to revise both the annual and the 24-hour average National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM_{2.5}) significantly downward to protect public health, and to establish a stringent new 24-hour standard for coarse particulate matter (PM_{10-2.5}). Specifically, we believe that the standards should be set at – or below – the low end of the ranges recommended in the final EPA Staff Paper. Ample scientific evidence supports adopting lower standards in order to protect the health of people who are most susceptible to the serious health effects of these pollutants.

More than 2,000 peer-reviewed scientific studies have been published since 1996 when EPA last updated the NAAQS for particulate air pollution. These studies, as discussed and interpreted in the 2004 EPA Criteria Document, validate earlier epidemiologic studies linking both acute and chronic fine particle pollution with serious morbidity and mortality. The newer research has also expanded the list of health effects associated with PM, and has identified health effects at lower exposure levels than previously reported. In fact, the science is now sufficiently strong that it is appropriate to conclude that PM_{2.5} is causally associated with numerous adverse health effects in humans, at exposure levels far below the current standards. Such a conclusion demands prompt action to protect human health.

The major health effects of fine particulate matter include reduced lung function, cough, wheeze, missed school days due to respiratory symptoms, increased use of asthma medications, cardiac arrhythmias, strokes, emergency room visits, hospital admissions, lung cancer, and premature death – at levels well below the current national air quality standards.

A growing body of evidence also indicates that short-term exposure to PM_{10-2.5} is associated with hospitalization for cardiopulmonary diseases in children and the elderly, increased respiratory symptoms, and decreased lung function

and we believe a new standard for this coarse fraction of PM is now warranted.

Infants and children are especially sensitive, as are the elderly, and people with pre-existing heart disease, lung disease, or diabetes. The new EPA standards should be set at levels that will protect these sensitive people.

We urge you to set the following health-based NAAQS for particulate matter:

- **Annual average PM_{2.5} standard of 12 µg/m³**
- **24-hour average PM_{2.5} standard of 25 µg/m³ (99th percentile)**
- **A stringent 24-hour average PM_{10-2.5} standard, applied equally to all areas of the country.**

The EPA risk assessment focusing on just nine U.S. cities indicates that 4,700 premature deaths would occur each year even after these cities meet current PM_{2.5} standards. Reducing both the annual average and 24-hour standards for PM_{2.5} as suggested above would reduce excess deaths from PM_{2.5} pollution in these nine cities by 87 percent. The national reduction in deaths and illnesses will be substantial.

In the case of coarse particles, it is important that a uniform national standard be set to provide equal protection for all citizens.

We oppose any effort to allow “spatial averaging” among air monitors, as such an approach would allow some communities to become pollution hot-spots without any requirement to mitigate local air quality problems. We also urge you to adopt the 99th percentile form of the 24-hour standards, to minimize the number of days that communities are allowed to exceed the standard.

Thank you for considering our views.

Sincerely,

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(see attached list of signatories)

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