

**COMMENTS** on **PROPOSED NATIONAL  
AMBIENT AIR QUALITY STANDARDS FOR  
PARTICULATE MATTER**, *71 Federal Register 2620*  
(January 17, 2006)

**(EPA Docket Number OAR-2001-0017)**

By the National Association of Manufacturers

Submitted to the Environmental Protection Agency on  
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**COMMENTS OF THE  
NATIONAL ASSOCIATION OF MANUFACTURERS  
to the  
ENVIRONMENTAL PROTECTION AGENCY  
regarding  
DOCKET NUMBER OAR-2001-0017**

**PROPOSED NATIONAL AMBIENT AIR QUALITY STANDARD (NAAQS) FOR  
PARTICULATE MATTER**

The National Association of Manufacturers (NAM) submits these comments in response to the Environmental Protection Agency's (EPA) Proposed National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM), as published in the Jan. 17, 2006, issue of the *Federal Register*, *71 Federal Register 2620*. The NAM is the nation's largest industrial trade association representing small and large manufacturers in every industrial sector and in all 50 states. Changes to the NAAQS for PM under the Clean Air Act (CAA) will directly impact the operation of our members' manufacturing facilities and power plants.

The NAM's mission is to enhance the competitiveness of manufacturers and improve American living standards by shaping a legislative and regulatory environment conducive to U.S. economic growth. As a general matter, the NAM is supportive of EPA regulations that are designed to provide real net benefits to environmental quality and the public health, including the health of manufacturing workers and their families. Conversely, the NAM opposes emissions regulations that would impose more compliance costs on the manufacturing sector, especially those that do not demonstrate environmental or health benefits through thorough scientific study.

The NAM is expressing its strong opposition to the EPA's proposed reduction of the 24-hour primary standard for fine particulate matter (PM<sub>2.5</sub>) through separate comments filed in conjunction with a group of allied trade associations. Therefore, only summary comments on the EPA's proposed reduction of the 24-hour fine PM standard are included in this submission. Because the EPA also proposes to establish a NAAQS for coarse particulate matter (PM<sub>10</sub>) that will have a direct impact on manufacturing operations through increased compliance costs, the NAM submits the below comments, urging the EPA not to impose such a standard.

## **I. Overview**

The EPA's proposed revisions address two categories of PM<sub>2.5</sub>, which are 2.5 micrometers in diameter and smaller, and coarse particles which are smaller than 10 micrometers in diameter but larger than PM<sub>2.5</sub>. Specifically, these comments focus mostly on the EPA's proposed coarse particle standard, or standard for PM<sub>10</sub>.

The PM<sub>10</sub> standard that the EPA proposes is a 24-hour PM<sub>10-2.5</sub> standard "qualified so as to include any ambient mix of PM<sub>10-2.5</sub> that is dominated by re-suspended dust from high-density traffic on paved roads and PM generated by industrial sources and construction sources." *71 Fed.*

*Reg. 2620 (Jan. 17, 2006) at 2620.* The concentration term of the proposed PM<sub>10</sub> standard is 70 µg/m<sup>3</sup>. According to the EPA, that level is intended to provide a “generally equivalent level of protection” to the 1987 PM<sub>10</sub> standard.

In reviewing or promulgating a new standard, the EPA is compelled by Section 109(b) of the CAA “to establish standards that are neither more nor less stringent than necessary” to protect public health and welfare. As the arguments below will demonstrate, the EPA would transcend its statutory authority pursuant to the CAA by moving forward with a new standard for coarse PM.

## **II. Sound Science Does Not Justify Imposition of a New Standard for PMc**

Over the last three decades, many medical and public health experts in respiratory disease epidemiology, toxicology and clinical treatment have reached a consensus that exposure to coarse PM at ambient levels does not have adverse health impacts.

The idea for developing a coarse PM standard is based on its potential impact in urban areas, where the hypothesis posits that it has the potential to combine with other substances that may be hazardous, such as industrial emissions, construction emissions, or mobile source emission components. This theory was first put forward in April of 2005, and has been articulated in some detail with a proposed rationale in the Jan. 17, 2006, Federal Register notice. The notice also asks for comment on a number of alternatives, including the alternative of not adopting a coarse PM standard at this time.

The concept advanced by the EPA as a justification for the proposed coarse PM NAAQS is merely a theory. This novel theory cannot serve as the justification for adopting a health-based standard at a specific concentration level, such as that proposed, especially when that standard is nearly double the stringency of the prior PM<sub>10</sub> standard in atmospheres dominated by coarse particles. In presenting its proposed 24-hour coarse standard, the EPA places primary reliance on four studies that it claims provided the support necessary for demonstrating the necessity of controlling coarse PM to a concentration of 70 micrograms per cubic meter (µg/m<sup>3</sup>) *Id.* at 2655-68. However, in a later discussion of a possible “alternative interpretation” of the health evidence, the EPA acknowledges the flaws in those studies. *Id.* at 2671-72.

In the primary study on which the EPA relied to support an “urban” PM<sub>10-2.5</sub> standard - namely the Detroit study (Ito, 2003) - the EPA states that when PM<sub>2.5</sub> is considered, then “the PM<sub>10-2.5</sub> associations lose statistical significance.” In the Toronto study (Burnett 1997), the apparent association of health effects with coarse PM<sub>10-2.5</sub> “disappeared after adjustment for O<sub>3</sub>, NO<sub>2</sub>, and SO<sub>2</sub>.” In addition, the Toronto study did not find statistically significant associations between monitored cardiac and respiratory effects and coarse PM. In Phoenix (Mar 2003), only single pollutant models were used, and only a “marginally significant (p<.10)” association was found. Anomalously, the Phoenix study found no significant association between total mortality and PM<sub>2.5</sub>, contrary to virtually all of the other epidemiological studies cited by the EPA. Any reliance on the Coachella Valley, Calif. (Ostro, 2003) study also seems entirely unjustified. Not only does it attribute deaths in Palm Springs to exposure measured in the city of Indio, but it

finds no association between fine PM and health effects, contrary to virtually all other EPA studies. In addition, it models 24-hour concentrations for the 75 percent of the period for which it has no PM<sub>2.5</sub> data. *Id.*

What should be clear is that the coarse PM proposal is not supported by the studies. The scientific evidence does not show any significant association with health effects at ambient concentrations. Those few studies purporting to show an association with coarse PM health effects either do not support that characterization, or are so fatally flawed that they are contrary to virtually all of the other evidence considered. In fact, as the EPA itself notes, when fine PM or other criteria pollutants are considered, even the marginal statistical associations in a few anomalous, one-pollutant studies disappear. *Id.*

### **III. EPA's Assertion that a New Standard Would Provide "Protection Equivalent to the 1987 PM<sub>10</sub> Standard," Does Not Provide a Rational Basis for a New, Coarse PM Standard.**

In 1997 the EPA promulgated a standard for coarse PM that replaced the original standard promulgated in 1987. In 1999, however, the U.S. Court of Appeals for the D.C. Circuit vacated the 1997 standard, ruling in effect that there was too much regulatory overlap between regulation of coarse PM and PM<sub>2.5</sub> (*American Trucking Associations, Inc. v. EPA*, 175 F.3d 1027 (D.C. Cir. 1999)). Since that court decision, federal regulators have resorted to the 1987 standard for coarse PM.

While acknowledging the weaknesses of the scientific basis supporting a standard for coarse PM, the EPA asserts other rationales for its proposed 70 µg/m<sup>3</sup> coarse PM<sub>10-2.5</sub> standard. Chief among this is its assertion that that concentration is "equivalent" to the 150 µg/m<sup>3</sup> PM<sub>10</sub> 24-hour standard promulgated in 1987, and would therefore provide public health protection "equivalent" to that provided by the 1987 standard. That proposition does not bear scrutiny.

First, federal workplace regulations promulgated on rationales identical to the EPA's reasoning for moving forward on a coarse PM standard are significantly less stringent than what the EPA proposes. One will look in vain for any substantial study supporting the health effects of coarse PM in the ambient air at 70µg/m<sup>3</sup>. This is a concentration that is less than five one-thousands of the concentration of OSHA's total dust occupational health standard serving an equivalent purpose.

Second, the 1987 PM<sub>10</sub> standard was based on fine PM, namely British Smoke measurements, not coarse PM. *62 Fed. Reg. 38659* (July 18, 1997). Fine PM and coarse PM are separate sub-pollutants and are in no way equivalent. To equate the two would be arbitrary.

Third, as stated previously, the Court in *American Trucking Associations, Inc. v. EPA* found that PM<sub>10</sub> was confounded by including indeterminate amounts of fine and coarse PM. The fundamental reasoning of the case negates any possibility of equating PM<sub>10</sub> with one of the two indeterminate components of PM<sub>10</sub>.

Fourth, PM<sub>10</sub> is made up of different mixes of fine and coarse PM in different sections of the country. In arid, southwestern cities, coarse PM often constitutes 80 percent or more of PM<sub>10</sub>, while in humid eastern cities, fine PM may constitute 80 percent or more of PM<sub>10</sub>. One hundred µg/m<sup>3</sup> measured in an eastern city with such a ratio of fine to coarse PM would have 20 µg/m<sup>3</sup> of coarse PM, while 100 µg/m<sup>3</sup> in a southwestern city would have 80 µg/m<sup>3</sup> of coarse PM. With exactly the same amount of PM<sub>10</sub>, the eastern city would be in compliance with the 70 µg/m<sup>3</sup> standard proposed, while the southwestern city would be in violation. Again, not only are the two situations not equivalent, but the western cities where coarse PM predominates are discriminated against. This is particularly ironic in view of the EPA's reliance on studies from Toronto, Detroit, Steubenville, Ohio, and other humid, largely eastern cities to support its health effects contentions. Those cities would not be subject to any controls as a result of the doubling of the stringency of the 1987 PM<sub>10</sub> standard of 150 µg/m<sup>3</sup> to 70 µg/m<sup>3</sup>, while arid western cities, where the evidence is to the contrary, may be expected to exceed it.

In fact, the only two studies cited by the EPA in support of its PM<sub>10</sub> standard (Hefflin, 1991; Gordian 1996) were at concentrations well above 1,000 µg/m<sup>3</sup>, while several studies have shown no effects from exposure to concentrations well above 10,000 µg/m<sup>3</sup>.

#### **IV. EPA also does not Provide a Rational Scientific Basis for Revising the 24-hour Fine Particle Standard**

A review of EPA's proposed rule to lower the 24-hour fine particle standard reveals that the EPA proposal is not supported by the underlying data. Since the last science review in 1997, serious problems were identified with the validity of acute time-series epidemiology studies. This has resulted in increased uncertainty in risk estimates derived from these studies. Reanalysis of the key long term epidemiology studies has resulted in valid alternate conclusions from these studies and again, increased uncertainty over the health effects associated with exposure to PM<sub>2.5</sub>. Furthermore, since the last science review in 1997, the risk coefficients from the key studies have decreased. This has resulted in a decrease in the magnitude of the risks associated with fine particle exposure, as described by the EPA's own estimates. The EPA has also selectively and arbitrarily used the results of time series studies as a basis for their revised standard. Under these circumstances, i.e., increased uncertainty and decreased risk estimates, the EPA's authority under Section 109 (b) of the Clean Air Act does not support a lowering of the standards.

#### **V. The NAAQS Directly Impacts Manufacturers, the Engines of Technological Innovation**

When the EPA designates counties as being in non-attainment of any NAAQS, whether it be for PM<sub>2.5</sub>, coarse PM, or ozone, state and federal regulators must develop a State Implementation Plan (SIP) in order to bring the area into attainment, or compliance, with the CAA. Regulators often target large stationary sources, including manufacturing facilities, chemical and petroleum refineries, and electric or power generation facilities when exploring the various "control measures," or regulations, that will be implemented to bring the area into compliance by the designated target date. A new standard for coarse PM, one that will do nothing to fulfill the EPA's statutory duty to protect environmental quality and public health, will increase the compliance costs of manufacturing and possibly reduce employment. As

described below, a reduced 24-hour fine PM standard that is arbitrary and not based on a rational scientific basis will adversely impact combustion and energy related manufacturing. Diminished resources for research and development will stymie technology innovation, thereby frustrating efforts to improve long-term public health and environmental quality. By moving forward with a new standard based on currently available data, the EPA could actually undermine public and private initiatives to improve air quality.

## **VI. A Stringent NAAQS Will Diminish U.S. Energy Supply, Competitiveness**

The manufacturing sector uses about one-third of the nation's energy, including one-third of its natural gas and almost 30 percent of its electricity. Compliance with regulations promulgated pursuant to the CAA such as Title V operating permits and power plant permitting, among others, comprise a large percentage of energy and electricity costs for American manufacturers and consumers. According to a recent NAM study, external overhead costs, including regulation and rising energy prices, add approximately 22 percent to U.S. manufacturers' unit labor costs (nearly \$5.00 per hour worked) relative to their major foreign competitors. More specifically, as a percentage of output, American manufacturers spend considerably more on pollution abatement than do their competitors in Germany, Japan, France, the U.K., Canada, Mexico, China, South Korea and Taiwan. Accordingly, the NAM has a vested interest in the EPA's development of rules that address air pollutants in a cost-effective manner without interfering with affordable and reliable energy for American consumers and manufacturers.

A stringent NAAQS will also encourage increased use of already scarce natural gas supplies and while promoting fuel switching from coal to natural gas. The U.S. has the most plentiful coal reserves in the world, and modern technologies including coal gasification make it more environmentally sound than every. Increasing demand for natural gas will continue to harm the manufacturing sector while realizing minimal, if any, environmental benefits.

The NAM supports continued progress, enhancing air quality while growing the economy, under the CAA. Promulgating redundant standards will only hinder that progress. According to EPA statistics, between 1970 and 2003, "total emissions of the six principal air pollutants dropped by 51 percent" while "gross domestic product increased 176 percent, vehicle miles traveled increased 155 percent, energy consumption increased 45 percent, and U.S. population grew by 39 percent." The NAM urges the EPA to streamline existing programs where possible to give business planners the certainty necessary to make capital expenditures. Such streamlining will actually assist the EPA in achieving its statutory mandate to improve environmental quality by allowing industry to develop more efficient technologies. The EPA's proposal to impose a new PM<sub>10</sub> standard will only obstruct innovation, and therefore ultimately have an adverse impact on achieving environmental quality goals.

## **VII. Executive Order 13211**

The EPA should comply with E.O. 13211, analyzing the impacts of the proposed NAAQS on energy supplies. E.O. 13211, issued in May 2001, provides the following:

### **Executive Order 13211**

#### **Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use**

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to appropriately weigh and consider the effects of the Federal Government's regulations on the supply, distribution, and use of energy, it is hereby ordered as follows:

Section 1. Policy. The Federal Government can significantly affect the supply, distribution, and use of energy. Yet there is often too little information regarding the effects that governmental regulatory action can have on energy. In order to provide more useful energy-related information and hence improve the quality of agency decision making, I am requiring that agencies shall prepare a Statement of Energy Effects when undertaking certain agency actions. As described more fully below, such Statements of Energy Effects shall describe the effects of certain regulatory actions on energy supply, distribution, or use.

Section 2. Preparation of a Statement of Energy Effects.

- a. To the extent permitted by law, agencies shall prepare and submit a Statement of Energy Effects to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, for those matters identified as significant energy actions.
- b. A Statement of Energy Effects shall consist of a detailed statement by the agency responsible for the significant energy action relating to:
  - i. any adverse effects on energy supply, distribution, or use (including a shortfall in supply, price increases, and increased use of foreign supplies) should the proposal be implemented, and
  - ii. reasonable alternatives to the action with adverse energy effects and the expected effects of such alternatives on energy supply, distribution, and use.
- c. The Administrator of the Office of Information and Regulatory Affairs shall provide guidance to the agencies on the implementation of this order and shall consult with other agencies as appropriate in the implementation of this order.

Section 3. Submission and Publication of Statements.

- a. Agencies shall submit their Statements of Energy Effects to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, whenever they present the related submission under Executive Order 12866 of September 30, 1993, or any successor order.

- b. Agencies shall publish their Statements of Energy Effects, or a summary thereof, in each related Notice of Proposed Rulemaking and in any resulting Final Rule.

Section 4. Definitions. For purposes of this order:

- a. "Regulation" and "rule" have the same meaning as they do in Executive Order 12866 or any successor order.
- b. "Significant energy action" means any action by an agency (normally published in the Federal Register) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking:
  - (1)(i) that is a significant regulatory action under Executive Order 12866 or any successor order, and
  - (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or
  - (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.
- c. "Agency" means any authority of the United States that is an "agency" under 44 U.S.C. 3502(1), other than those considered to be independent regulatory agencies, as defined in 44 U.S.C. 3502(5).

Section 5. Judicial Review. Nothing in this order shall affect any otherwise available judicial review of agency action. This order is intended only to improve the internal management of the Federal Government and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

### **VIII. Conclusion**

The NAM opposes the EPA's proposal to establish a NAAQS for coarse PM and lower the 24-hour or annual NAAQS for fine PM. The current standards for PM sufficiently fulfill the EPA's mission to protect environmental quality and public health. The manufacturing sector and its 14 million workers urge you to reject this proposal. The National Association of Manufacturers urges the EPA to only issue proposals that are supported by sound science and will capitalize on the manufacturing sector's demonstrated record of technological innovation that continues to improve the quality of life for all Americans.