

**LEGAL MEMORANDUM  
SUPPORTING COMMENTS OF THE  
NATIONAL STONE, SAND AND GRAVEL ASSOCIATION  
ON  
PROPOSED RULE TO IMPLEMENT THE  
FINE PARTICLE NATIONAL AMBIENT AIR QUALITY STANDARDS**

**Introduction and Summary**

This Memorandum provides legal support for the attached Comments of the National Stone, Sand and Gravel Association (NSSGA) on EPA's proposed rule to implement the national ambient air quality standards (NAAQS) for fine particulate matter (PM).

Although the Clean Air Act provides EPA with the discretion to adopt and implement ambient standards that provide a reasonable degree of protection in the face of scientific uncertainty, the agency's discretion in this area is by no means unlimited. The courts have made it clear that double regulation of emissions under more than one ambient standard is not permitted. In addition, both Congress and the courts have required EPA to document its decisions with a reasoned scientific analysis based on the weight of the evidence presented in the Criteria Document, and to demonstrate that standards and implementation measures are necessary to prevent significant health risks. As demonstrated in the attached Comments, no such showing can be made with respect to fine PM emissions from aggregate operations, and development of control strategies would be difficult and costly. Under these circumstances, the relevant judicial and administrative precedents clearly support exclusion of aggregate emissions from fine PM implementation plans.

**Double Regulation**

In *American Trucking Associations v. EPA*, 175 F.3d 1027, 1054-55 (D.C. Cir. 1999), the court found that “PM10 is inherently confounded by the presence of PM2.5 particles, meaning that any regulation of PM10 pollution will include both coarse and fine particles . . . Far from working in conjunction to regulate coarse particles, PM10 and PM2.5 indicators, when used together, lead to “double regulation” of the PM2.5 component of PM10 . . .” Accordingly, the court vacated the 1997 PM10 standards “in view of our conclusion that PM10 amounts to an arbitrary indicator for coarse particle pollution.” EPA’s recent PM proposal recognizes that this decision prohibits double regulation of emissions under both the fine and coarse PM standards. See 71 Fed. Reg. 2673 (January 17, 2006).

This principle prohibits regulation of aggregate emissions pursuant to the fine PM standards. As discussed in the attached Comments, fine PM emissions from aggregate operations currently are subject to regulation under the NAAQS for PM10, and EPA has proposed to address them in the future under new standards for coarse PM. Under these circumstances, the same emissions cannot be regulated under the standards for fine PM.

**Sufficiency of Evidence**

As demonstrated in the attached Comments, aggregate emissions contain very little fine PM, and they do not include the constituents associated with adverse health effects from fine PM exposure. Under these circumstances, regulation of aggregate emissions is not permitted by the relevant provisions of the Clean Air Act, which require EPA to demonstrate that ambient standards and implementation plans are necessary to prevent a significant risk of adverse public health effects.

Clean Air Act Section 108(a) limits EPA's authority to set ambient air quality standards to emissions "which may reasonably be anticipated to endanger public health or welfare . . . ." This judgment is to be made on the basis of air quality criteria which "shall accurately reflect the latest scientific knowledge" relevant to these issues (*id.*). Section 109(b) then requires the agency to set a standard at a level that is "requisite to protect the public health," based on such criteria. Section 307(d) authorizes the Federal Court of Appeals for the District of Columbia Circuit to invalidate a standard set by EPA if the court finds the agency's underlying rationale to be arbitrary, capricious, an abuse of discretion or otherwise in excess of the agency's statutory jurisdiction, authority or limitations.

Congress and the courts have uniformly construed these provisions to require that ambient standards must be based on a reasonable analysis of all of the relevant scientific data presented in the Criteria Document, considered as a whole. Prior to the 1977 Amendments to the Clean Air Act, some courts had interpreted the standard-setting provisions adopted in 1970 as authorizing regulation only to correct actual harm, rather than to prevent threatened harm that had not yet occurred.<sup>1</sup> The 1977 Amendments changed the statutory requirements for the basis of standards to clarify that preventive standards are permissible. However, the House Committee noted that while the amendments were intended to allow EPA to exercise judgment in predicting future risks,

[o]n the other hand, the committee does not intend this language as a license for "crystal ball" speculation. The Administrator's judgment must, of course, remain subject to restraints of reasoned decision-making (1977 House Rept. at 51).

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<sup>1</sup> H.R. Rep. No. 294, 95th Cong., 1st Sess. 43-49 (1977) [hereinafter "1977 House Rept."].

The approach adopted by the House Committee eventually was accepted in conference and written into the Act.<sup>2</sup>

These 1977 Clean Air Act Amendments were based in large part on the court's decision in Ethyl Corp. v. EPA, 541 F.2d 1 (1976) (en banc), which is expressly endorsed in the 1977 House Report (p. 49). In that case, the court held that EPA need not wait for proof of actual harm in setting public health standards under the Clean Air Act, but may regulate on the basis of data indicating a threat of harm where the critical facts are "on the frontiers of scientific knowledge." Even in such cases, however, the court "will demand adequate reasons and explanations . . ." (541 F.2d at 23, quoting Amoco Oil Co. v. EPA, 501 F.2d at 740-41). At a later point, the court provided additional explanation of this approach:

Of course, we are not suggesting that the Administrator has the power to act on hunches or wild guesses. Amoco makes it quite clear that his conclusions must be rationally justified. . .

All of this is not to say that Congress left the Administrator free to set policy on his own terms. To the contrary, the policy guidelines are largely set [by the terms of the Act]. These prescriptions direct the Administrator's actions. Operating within the prescribed guidelines, he must consider all the information available to him (541 F.2d at 28-29).

The approach adopted by the Ethyl court and endorsed by Congress in 1977 has been followed uniformly in subsequent cases adjudicating the validity of national ambient air quality standards. In Lead Industries Association v. EPA, 647 F.2d 1130, 1146-47 (D.C. Cir. 1980), the court explained that where factual conclusions are capable of being drawn from the evidence in the record, they must be supported by substantial evidence in the record "when considered as a whole." Where scientific knowledge is insufficient to permit fully informed factual determinations, the court "will indeed scrutinize such judgments carefully" and EPA must

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<sup>2</sup> See H.R. Rep. 564, 95th Cong., 1st Sess. 184 (1977)(Conference Report).

provide a reasoned explanation "calculated to negate the dangers of arbitrariness and irrationality in the formulation of rules for general application in the future" (*id.*).

Similarly, in NRDC v. EPA, 902 F.2d 962, 968, 971 (D.C. Cir. 1990), which involved review of the current PM standards, the court found itself obligated to "carefully review the record to ascertain that the agency has made a reasoned decision based on reasonable extrapolations from some reliable evidence . . . In setting a standard under §109, the Administrator must take into account all the relevant studies revealed in the record and make an informed judgment based on the available evidence." Quoting EPA, the court also found that where, as here, "data are uncertain and limited in scope," it is "particularly important to examine the results of qualitative data from a number of epidemiological, animal, and ambient particle composition studies . . ." (902 F.2d at 972). Accord, American Petroleum Inst. v. Costle, 665 F.2d 1176, 1187 (D.C. Cir. 1981)(reviewing ozone standard).

Thus, Congress and the courts have required EPA to: (1) support factual determinations with substantial scientific evidence in the record; and (2) in cases where scientific uncertainty prevents establishment of relevant facts, support policy judgments with reasonable extrapolations based on reliable evidence after considering all of the evidence in the record as a whole. As demonstrated in the attached Comments, the evidence in the fine PM record clearly supports exclusion of aggregate emissions from fine PM implementation plans.

### **Significant Risk**

Congress also required EPA to demonstrate that ambient standards are necessary to protect against significant public health risks. As discussed above, in adopting the 1977 Clean Air Act amendments that changed the basis for administrative standards, the House Committee expressly endorsed the opinion in Ethyl Corp. v. EPA, 541 F.2d 1, 13 (D.C. Cir. 1976), which

holds that EPA may set standards only when necessary to prevent "a significant risk of harm" (1977 House Rept. at 49).

The amendments were designed to apply the significant risk approach to Section 211, which was at issue in the Ethyl case, and to "all other sections of the bill relating to public health protection" (id.). The House Committee described the purpose of the amendments as follows:

To authorize the Administrator to weigh risks and make reasonable projections of future trends; thus, to find a middle road between those who would impose a nearly impossible standard of proof on the Administrator before he may move to protect public health and those who would shift the burden of proof for all pollutants to make the pollution source prove the safety of its emissions as a condition of operation (Id.).

In several places, the Committee Report makes it clear that standards are to address only "significant risk," not any risk.<sup>3</sup> The Committee also was careful "to provide for adequate judicial review of the reasonableness of the Administrator's judgment in assessing risks" (1977 House Rept. at 50).

In the years following adoption of the 1977 Clean Air Act Amendments, the courts began to address the "significant risk" requirement in the occupational safety and health context. In Industrial Union Dept., AFL-CIO v. American Petroleum Institute, 448 U.S. 607, 646 (1980) the Court rejected an OSHA attempt to establish a health standard for benzene without showing that the standard was necessary to protect against a significant risk of harm. The court found that the agency had failed to perform its statutory duty to prove that current exposure levels were "unsafe -- in the sense that significant risks are present and can be eliminated or lessened by a change in practices" (448 U.S. at 642). The Court noted that in the absence of a clear statutory mandate, it was unreasonable to assume that Congress intended to grant OSHA the "unprecedented power

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<sup>3</sup> See, e.g., 1977 House Rept. at 43, 45, 46, 47, 48.

over American industry" conferred by regulation in the absence of a requirement to demonstrate significant risk. The court also explained that "the Government's theory would give OSHA power to impose enormous costs that might produce little, if any, discernible benefit" (448 U.S. at 645). The Court stated that "[i]f the Government was correct in arguing that neither §3(8) nor §6(b)(5) [of the OSH Act] requires that the risk from a toxic substance be quantified sufficiently to enable the Secretary to characterize it as significant in an understandable way, the statute would make such a sweeping delegation of legislative power that it might be unconstitutional" (448 U.S. at 646). In subsequent cases, the courts held that OSHA must support its standards with reasonable quantitative risk assessments.<sup>4</sup>

This issue was addressed in the context of ambient air quality standards in Whitman v. American Trucking Ass'ns, 531 U. S. 457, 473 (2001). The court of appeals had held that it could not decide how much scientific support is required for ambient standards because neither Congress nor EPA had articulated any "intelligible principle" for choosing the concentration limits in the face of scientific uncertainty. For that reason, the court found that EPA's authority to set ambient standards amounted to an unconstitutional delegation of power, and ordered EPA to develop criteria for setting standards in such circumstances. Citing the Benzene Case, the Supreme Court reversed the constitutional holding of the D.C. Circuit, stating:

We agree with the Solicitor General that the text of §109(b)(1) of the CAA at a minimum requires that "[f]or a discrete set of pollutants and based on published air quality criteria that reflect the latest scientific knowledge, [the] EPA must establish uniform national standards at a level that is requisite to protect public health from the adverse effects of the pollutant in the ambient air." Requisite, in turn, means "sufficient but not more than necessary." *These limits on the EPA's discretion . . . resemble the Occupational Safety and Health Act provision requiring the*

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<sup>4</sup> See, e.g., *AFL-CIO v. OSHA*, 963 F.2d 962, 975-80 (11<sup>th</sup> Cir. 1992).

*agency to “set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer any impairment of health ‘ – which the Court upheld in Industrial Union Dept., AFL-CIO v. American Petroleum Institute, 448 U.S. 607, 646 (1980) . . . (emphasis added).*

This language in the Benzene opinion, cited by the Court in the ozone/particle case, is the key to the Court’s holding that CAA §109 is not unconstitutional, and the key to the validity of any future particle standards. EPA must set concentration limits based on scientific data and analyses adequate to ensure that the potential public health risk can “be quantified sufficiently to enable [EPA] to characterize it as significant in an understandable way.”

In short, Congress has limited ambient standards to protection against significant public health risks, the courts have held demonstrations of significant risk must be based on sound quantitative risk assessment, and the Supreme Court has recognized that these principles apply to PM ambient standards. These factors argue strongly against regulation of aggregate emissions in fine PM implementation plans, given the EPA findings and conclusions discussed in the attached Comments.

### **Exclusion Precedents**

As discussed above, Clean Air Act Sections 108 and 109 limit EPA’s standard-setting authority to “air pollution which may reasonably be anticipated to endanger public health,” and standards that are “requisite to protect the public health.” Neither of these conditions is satisfied by fine PM emissions from aggregate operations. Accordingly, EPA has no authority to regulate such emissions.

In *Alabama Power Co. v. Costle*, 636 F.2d 323, 370 & n.134 (D.C. Cir. 1979), the court addressed EPA’s authority to exclude from NAAQS pollutants, or subsets of them, that do not

present “substantial public health or welfare concerns.” In that case, the court was reviewing a PSD exemption adopted by EPA for fugitive emissions. The court vacated the exemption, finding it unnecessary as a result of other provisions in the Act. However, the court also provided EPA with a blueprint for excluding pollutants for which ambient standards are not justified:

EPA has discretion to define the pollutant termed "particulate matter" to exclude particulates of a size or composition determined not to present substantial public health or welfare concerns. Such "excluded particulates" would remain "air pollutants" within the meaning of the Act, section 302(g), but would be dropped from the list of pollutants compiled by the EPA Administrator under section 108(a)(1) a list comprised of air pollutants the "emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." Since national ambient air quality standards may exist only for those pollutants lists under section 108(a)(1), "excluded particulates" would not be subject to NAAQS.

There is also regulatory precedent for exclusion windblown dust emissions. EPA's 1977 guidance on development of SIPs for implementation of the then-existing standards for total suspended particulate (TSP) gave priority first to control of emissions from major stationary sources, then to emissions of fugitive dust in urban areas. Regulation of rural fugitive dust was given a much lower priority, “on the grounds that: (1) urban soil was believed to be contaminated and, therefore, potentially more harmful than the native soils in rural areas; (2) the potential for significant population exposures and attendant health effects was much greater in urban areas; and (3) scarce resources at the federal, state and local agency levels could be most effectively brought to bear on the more pronounced problems found in urban areas.”<sup>5</sup> This guidance, which became known as the rural fugitive dust policy, effectively exempted rural fugitive dust from SIP control strategies and attainment demonstrations.

A similar situation is now presented by aggregate emissions of fine PM. The emissions are not harmful, the potential for significant public exposure and attendant health effects is nil, and scarce public resources would be better spent addressing other sources of fine particulate that may present real public health problems. Under these circumstances, aggregate emissions should be excluded from fine PM implementation plans.

### **Control Difficulties and Costs**

In addition to the concerns raised above, the attached Comments also demonstrate that regulation of aggregate emissions would be difficult and costly, and would divert limited resources from fine PM emissions of public health concern. While ambient air quality standards are to be based primarily on public health concerns, the courts have recognized that feasibility and cost-effectiveness of the available control measures are primary considerations in the implementation phase.

For example, in Union Electric Co. v. EPA, 427 U.S. 246, 266 (1976), the Supreme Court stated:

Perhaps the most important forum for consideration of claims of economic and technological feasibility is before the state agency formulating the implementation plan. So long as the national standards are met, the state may select whatever mix of control devices it desires, and industries with particular economic or technological problems may seek special treatment in the plan itself.

This language in *Union Electric* was quoted with approval in *Whitman v. American Trucking Associations*, supra, where the Court reaffirmed that costs are to be considered in development of implementation plans (531 U.S. at 470-71).

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<sup>5</sup> 59 Fed. Reg. 42003 (August 16, 1994); accord, 52 Fed. Reg. 24716 (July 1, 1987).

The courts have also held that in cases where a Federal Implementation Plan is imposed by EPA, “it is clear that . . . the Administrator was required to find that this level of emission control *is* economically and technologically feasible . . . In reaching this determination, the Administrator must have exercised reasoned discretion.” Bunker Hill Co. v. EPA, 572 F.2d 1288, 1294 (9th Cir. 1977), accord, Kennecott Copper Corp. v. Train, 526 F.2d 1149 (9th Cir. 1975), cert. denied, 425 U.S. 935 (1976). Indeed, EPA’s own regulations for implementation of ambient air quality standards encourage states to consider alternative impacts and cost-effective control strategies (see 40 CFR 51.101). And the courts have noted that “it could be arbitrary and capricious for the Agency to reject obviously less burdensome but equally effective controls in favor of more expensive or onerous ones.” South Terminal Corp. v. EPA, 504 F.2d 646, 676 (1st Cir. 1974).

These considerations provide additional support for exclusion of aggregate emissions from fine PM implementation plans.

### **Conclusion**

For the foregoing reasons, in addition to those presented in the attached Comments, EPA should exclude emissions from aggregate operations from fine PM implementation plans.

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