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Appellate Court Tells about Ambient Standards for

by John Bachmann

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The new year brought the latest chapter in the continuing saga of U.S. National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) and ozone (O_3).[1] The U.S. Environmental Protection Agency (EPA) promulgated revisions that strengthened the 1997 PM and O_3 standards in October 2006 and March 2008, respectively. Key issues and perspectives of several stakeholders on these NAAQS reviews were the subject of two *EM* issues.[2] As is the norm for NAAQS decisions, several parties filed lawsuits on behalf of stakeholders interested in strengthening or weakening the final outcome. On February 24, the U.S. Court of Appeals for the District of Columbia issued rulings on the PM litigation *(American Farm Bureau vs. EPA No. 06-1410 (D.C. Cir. Feb. 24, 2009))* that challenged some aspects of EPA's decision and upheld others.

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EPA to Think Again Particulate Matter

In brief, the court found that the fine particle ($PM_{2.5}$) standards "were, in several respects contrary to law and unsupported by adequately reasoned decision-making," but denied petitioners' challenges to the standards for coarse particles (PM_{10}). More specifically:

- The court granted the petitions of state and environmental groups and remanded the annual primary $PM_{2.5}$ standard of 15 micrograms per cubic meter ($\mu g/m^3$) to EPA for reconsideration because the agency failed to explain adequately why this level is *"requisite to protect the public health,"* including the health of vulnerable subpopulations, while providing *"an adequate margin of safety."*

- The court also granted environmental groups' petition and remanded EPA's decision to set secondary $PM_{2.5}$ NAAQS identical to the primary NAAQS, stating that *"EPA unreasonably concluded that the NAAQS are adequate to protect the public welfare from adverse effects on visibility."*

These decisions are of some interest because they suggest a limit on the extent of the D.C. Court's deference to EPA's judgment on the interpretation of the underlying scientific information in making these decisions. The court took strong notice that the EPA Administrator's final decisions for both standards were inconsistent with the recommendations and advice of the Clean Air Scientific Advisory Committee (CASAC), as well as those of EPA staff. They scrutinized technical aspects of the rationale. In the case of the annual primary standard, the court took specific issue with EPA's assessment of two long-term studies relating to children's health. In past NAAQS cases, the court has generally agreed with or deferred to EPA's interpretation of the science, even if taking issue with the final decision (e.g. *Whitman vs. American Trucking Associations, Inc., No. 99-1257, slip op. (Feb. 27, 2001)).*

The court's rejection of the agricultural industry petitioners' challenge to the final decision on coarse standards settled a long-standing issue that arose out of their vacatur of the 1997 PM_{10} standards. There, they found the agency had not explained why using PM_{10}, which includes both fine and coarse particles, as the indicator for coarse PM standards was not an unreasonable double regulation of fine particles. In the present case, the court found "EPA has now cured that failure of explanation and provided a reasonable rationale for its choice of PM_{10}."

Three of the stakeholders who participated in these proceedings have provided some perspectives below. For its part, because EPA is fairly far along in the next review of the PM NAAQS, it is likely the agency will use the process and outcome of the ongoing review as the basis for its response to the remand. In the meantime, EPA and states will continue to implement $PM_{2.5}$ standards, as the daily standard was not remanded, and the annual standard remains in place until EPA responds.

This decision has also affected the litigation on the 2008 O_3 NAAQS, which presents similar issues. On March 10, with agreement of all of the other litigants, EPA asked the court to hold action on the litigation "to allow time for appropriate EPA officials that are appointed by the new Administration to review the [O_3] NAAQS rule to determine whether the standards established in the [rule] should be maintained, modified, or otherwise reconsidered." EPA requests 180 days to consider its options. In this case, any near-term action would need to be based on the scientific and technical record established in the 2008 review. Stay tuned.

References

1. Bachmann, J.D. A Summary of the A&WMA 2007 Critical Review—Will the Circle Be Unbroken: A History of the U.S. National Ambient Air Quality Standards; *EM* **2007** *June*, 27-34.
2. See *EM* June 2006, 8-29; and *EM* January 2008, 5-25.

Stakeholders' Responses

"The health effects of PM are of such magnitude that we consider this topic a top priority."

Response from John Paul and Eddie Terrill, former co-presidents of National Association of Clean Air Agencies (NACAA), and co-authors of the article "Setting a Protective PM Standard: A View from the Frontline" (EM *June 2006, 19-23); and Amy Royden-Bloom, senior staff associate, NACAA.*

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In April 2006, NACAA submitted formal comments on EPA's proposed rule to revise the PM NAAQS, as published in the *Federal Register* on January 17, 2006.[1] In June 2006, our main comments were expressed in an article published in *EM*. The complete list of concerns can be found in the formal comments; several are repeated here, followed by EPA's response in the final rule. We then note our perceived implications of the court's decision on future NAAQS.

NACAA recommended that EPA follow the advice of CASAC and set the primary annual standard for $PM_{2.5}$ in the range of 13–14 $\mu g/m^3$. EPA instead retained the annual standard of 15 $\mu g/m^3$. We recommended that EPA abandon its proposal to exempt PM coarse readings that were influenced by agricultural or mining operations and likewise remove its proposed changes to siting criteria. In the final rule, EPA retained the 24-hr PM_{10} standard without any qualifications to the indicator, any changes to the monitor siting requirements, or any source exclusions. Finally, we recommended that EPA adopt a secondary standard in the form of a sub-daily standard for visibility. EPA adopted a secondary standard equal to the primary standard.

In its February 24, 2009, decision, the D.C. Court remanded the annual primary and secondary NAAQS for PM to EPA for reconsideration.

NACAA members anticipate that new EPA Administrator Lisa Jackson will re-examine the record and the strong recommendations of CASAC and the EPA staff paper and propose a more stringent $PM_{2.5}$ annual standard and a secondary standard in a form that addresses visibility and other welfare issues. We stand ready to work with EPA and the various stakeholders on the standards and the monitoring and implementation issues that will follow. The health effects of PM are of such magnitude that we consider this topic a top priority.

Reference

1. U.S. Environmental Protection Agency. National Ambient Air Quality Standards for Particulate Matter; Proposed Rule; *Fed. Regist.* **2006**, *71*, 2620 (January 17, 2006).

"The court told EPA in no uncertain terms that the science matters."

Response from Janice E. Nolen, assistant vice president of national policy and advocacy for the American Lung Association (ALA). The article "Air Quality Standards Must Protect Public Health" by Norman Edelman, MD, chief medical officer for ALA, appeared in EM *June 2006, 24-29.*

The D.C. Court gave the Obama Administration the opening to restore the integrity of the science and protect public health when it returned the 2006 $PM_{2.5}$ standards to EPA in February. The court told EPA in no uncertain terms that the science matters. ALA is pleased not only that the court agreed with our arguments, but that the court understood the findings of CASAC and the recommendations of EPA staff, even if the former EPA Administrator did not.

PM is the most dangerous of the widespread air pollutants. It triggers asthma attacks, heart attacks, and strokes, among other damages; most critically, PM kills.

The 2006 revisions to the $PM_{2.5}$ standards preserved the 1997 annual standard while tightening the 24-hr standard. Wide agreement acknowledged that the 1997 24-hr standard needed strengthening, so the debate centered over the level of the annual standard. CASAC and EPA staff had seen these two as halves of a holistic approach to reducing $PM_{2.5}$. They saw sufficient evidence that the 24-hr standard needs the partnership of a complementary, tighter annual standard to protect against the risks from short-term exposure. Evidence indicated that a tighter annual standard would help reduce the dangerous, short-term exposures that occur below the peak, particularly for areas that would be in compliance with the 24-hr standard. Yet the agency blew past the science to reach its arbitrary decision to keep the annual standard intact. Tellingly, the court pointed out that EPA had contradicted the evidence and even its own past arguments.

Unfortunately, the court didn't require EPA to follow the same logic for coarse particles. Since the evidence that shows that it takes both standards to protect public health from the harm that fine particles produce, we see no reason to think that the dual controls would not be equally needed for coarse particles.

Other conclusions from the court provide further support for tighter standards. The court agreed with our arguments that children and other groups face higher risk and the standards must protect them in particular. The court also tossed out industry's flawed logic that a lack of evidence of harm is the same thing as evidence of safety. With that action, the court reminded EPA of the need to "err on the side of caution" when evidence is limited and risks are grave.

In January, a study by Pope et al.[1] showed us that cleaning up the air all across the nation can have profound health benefits—months literally added to our lives. With this

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court decision, ALA hopes that EPA will rapidly review the science and, this time, follow the evidence. Such an approach will no doubt lead to much more protective standards along with more aggressive steps to reduce the burden of PM.

Reference

1. Pope, III, C.A.; Ezzati, M.; Dockery, D.W. Fine-Particulate Air Pollution and Life Expectancy in the United States; *N. Engl. J. Med.* **2009**, *360* (4), 376-386.

"This decision only adds to the chaos of the PM regulatory landscape."

*Response from Lucinda Minton Langworthy, an attorney with the law firm of Hunton & Williams, and author of the article "Are EPA's Proposed Revisions to the PM Standards Appropriate?" (*EM *June 2006, 15-18); and Aaron M. Flynn, an attorney with Hunton & Williams.*

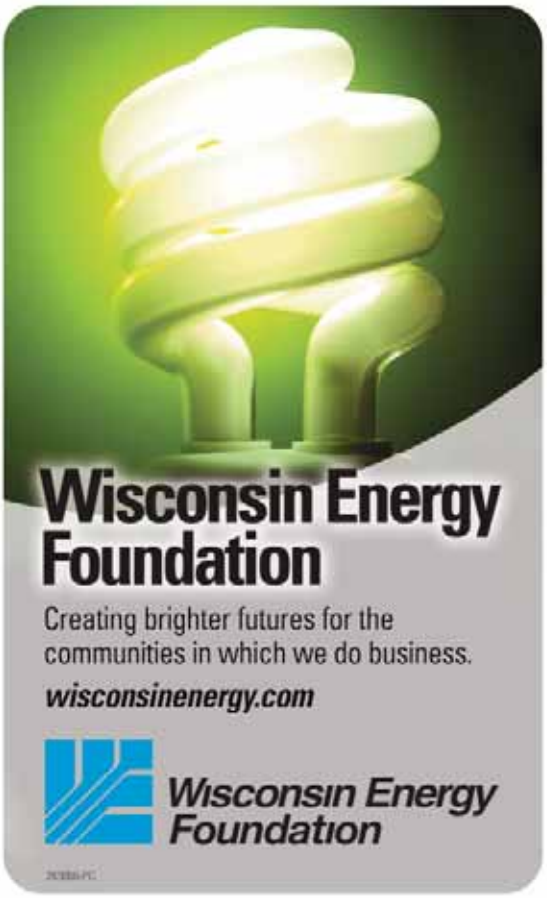
On February 24, 2009, the D.C. Circuit handed down its decision in *American Farm Bureau Federation vs. EPA*. While this decision clearly has a psychological impact, its immediate practical effect may not be as dramatic as might, at first blush, appear likely. The court left in place the standards that it found EPA had failed to justify adequately. States have already begun planning for their implementation and for implementation of the 35 $\mu g/m^3$ 24-hr standard that EPA adopted in 2006 and that was not challenged in court. EPA will obviously have to go back and consider whether to revise its annual $PM_{2.5}$ NAAQS and whether to set different standards to protect urban visibility, but the agency is already well along in a review of the PM NAAQS, begun in 2007 and planned for completion in 2011,[1] in which those questions as well as the adequacy of the 35 $\mu g/m^3$ 24-hr NAAQS and the PM_{10} NAAQS will be addressed. It seems sensible for the agency to fold its response to the remand into this ongoing proceeding.

On another level, though, this decision only adds to the chaos of the PM regulatory landscape. EPA and the states have yet to implement fully the $PM_{2.5}$ NAAQS adopted 1997.[2] While general implementation regulations for those NAAQS have been finalized,[3] EPA action on critical implementation issues remains pending.[4] Moreover, the general implementation regulations,[5] nonattainment designations for the 1997 NAAQS,[6] and regulations to implement a New Source Review permitting program for $PM_{2.5}$ are the subject of ongoing litigation.[7] EPA has yet to issue implementation rules or even detailed guidance concerning how states are to implement the 2006 rules. And, of course, EPA must now consider still more PM NAAQS revisions, implementation of which, if new standards are adopted, will almost certainly overlap with implementation of both the 1997 and 2006 standards.

Perhaps the time has come for Congress to consider whether the current statutory scheme for reviewing and implementing NAAQS is rational and whether some adjustment would be appropriate to allow a NAAQS to be implemented before it is revised. em

References

1. *Integrated Review Plan for the National Ambient Air Quality Standard for Particulate Matter;* EPA 452/R-08-004; National Center for Environmental Assessment, U.S. Environmental Protection Agency, Research Triangle Park, NC; March 17, 2008.
2. U.S. Environmental Protection Agency. National Ambient Air Quality Standards for Particulate Matter; *Fed. Regist.* **1997**, *62*, 38652 (July 18, 1997).
3. U.S. Environmental Protection Agency. Clean Air Fine Particle Implementation Rule; *Fed. Regist.* **2007**, *72*, 20586 (April 25, 2007).
4. See U.S. Environmental Protection Agency. Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM2.5)—Increments, Significant Impact Levels (SILs), and Significant Monitoring Concentration (SMC); *Fed. Regist.* **2007**, *72*, 54112 (Sept. 21, 2007).
5. *National Cattlemen's Beef Association vs. U.S. Environmental Protection Agency, No. 07-1227 (D.C. Cir. Feb. 12, 2008).*
6. *Catawba County, North Carolina vs. U.S. Environmental Protection Agency, No. 05-1064 (D.C. Cir. Jan. 1, 2009)*; See also U.S. Environmental Protection Agency. Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards; *Fed. Regist.* **2005**, *70*, 944 (Jan. 5, 2005).
7. *Natural Resources Defense Council vs. U.S. Environmental Protection Agency, No. 08-1250 (D.C. Cir. Dec. 3, 2008)*; See also Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5); *Fed. Regist.* **2008**, *73*, 28321 (May 16, 2008).



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