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1997 Ozone and Particulate Matter NAAQS Symposium: Introduction

The New National Standards for Ozone and Particles: Modest Public Health Progress or Public Policy Meltdown?

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A year after the final adoption of changes to the national ambient air quality standards for ozone and particles—and more than a decade after the last major review of the basic standards that guide our nation's air pollution regulatory program—the passionate debate about the Environmental Protection Agency's (EPA or the Agency) action has lost none of its zest, at least for the authors of the articles published in this issue of the *Tulane Environmental Law Journal*.

As the Assistant Administrator for Air and Radiation during the proposal and final rulemaking, I might naturally be expected to puff the importance of the changes to the standards, if only because of the massive amounts of Agency and personal time and resources that were consumed in their enactment, not to mention the congressional oversight hearings and press coverage that fanned public awareness of the controversy from

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late l997 through July l998. As a veteran of clean air battles dating back to the early l970s, and a Californian, my view of the actual changes wrought by the new standards is closer to that of Dr. James Lents, who points out that the new ozone standard represents a modest eight percent tightening of the standard in effect since 1979, (but an increase in allowable pollution of forty percent above the original EPA standard adopted in l971) while the new fine particle standard is roughly equivalent to a standard adopted by the California Air Resources Board based on its own review of the science. Considering the impact of the standards on current and future federal, state, and private pollution control efforts, as noted in the comments of the environmental lawyers and scholars represented herein, it is not hyperbole to say that in rewriting the two most widely violated air standards to make them conform with the most recent scientific information about the effects of these pollutants on human health and the environment, the EPA also gave the Clean Air Act (CAA) a new chance to prove itself as the most far-ranging and potent federal environmental statute ever.

To some, the new standards are simply illegitimate and should be overturned by the courts (some authors are also involved in petitions for review now pending in the United States Court of Appeal for the District of Columbia) or Congress. Keith Cole would throw the rulemakings out on procedural grounds: failure of the agency to conduct the analysis of impact on small businesses and other small entities that he argues is required by the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act signed into law by President Clinton in 1996. The Administrator considered and rejected the applicability of these statutes to the process of determining air quality standards, despite considerable pressure from members of Congress and the Small Business Administration to do so. If Cole's argument should prevail, the Agency would be required to begin a new rulemaking process.

Gary Marchant and C. Boyden Gray both assert that the agency should use cost-benefit analysis to set health-based standards. Gray goes so far as to claim that the Agency implicitly uses cost-benefit reasoning to arrive at its conclusions and therefore ought to be compelled, both under the Administrative Procedure Act and the due process clause of the Constitution to place such analysis on the record. Both apparently assume, although the EPA's Regulatory Impact Assessment for both standards found a net economic benefit from tightening both the ozone and particle standards, that explicit consideration of costs and benefits would have caused the EPA to conclude its review with a decision to retain the old standards. Marchant reads the law and recent court

decisions as allowing the EPA to use economic and political feasibility in determining where to set the health-based standards, since health studies seldom point to a threshold below which there is no adverse effect. It is unclear what weight these authors would have the Administrator give to cost projections in making a public health judgment.

In direct rebuttal, Curtis Moore argues that it is both morally wrong and analytically impossible to weigh the future costs of regulation against potential health benefits of attaining clean air standards. The EPA has a well-documented history of over-estimating costs of compliance with emissions limitations, a natural consequence of the fact that once rules are in place industry is free to find least-cost or even profitable technology and process changes to meet the new goals while addressing other business objectives. On the benefits side, there is a chronic shortage of research funding and basic disagreement among policy makers about the propriety or usefulness of monetizing the value of a life extended or an asthma attack foregone. As long as such tools exist, it is difficult to resist using them, but Moore makes a forceful case for basing the choice of national air standards on the democratic principle that ordinary people have a right to breathe clean air. Professor David Driesen extends the defense of public health as the sole basis for setting air standards, adding additional ideas about how the use of a cost/harm test would impede the steady (if sometimes slow and contentious) progress that has characterized the clean air program since Congress passed the original CAA Amendments of 1970.

Dr. George Thurston and Dr. James M Lents provide a more technical perspective on the new standards and the process by which they were set. Dr. Thurston addresses the complaints by some researchers that the scientific review process used by the EPA's Clean Air Science Advisory Committee in making recommendations to the Administrator was flawed because raw data underlying some of the most important epidemiological studies of airborne particles were not made available for re-analysis by the EPA or competing groups. Although he supports the EPA's use of peer-reviewed published articles, buttressed by selective third-party re-analysis of critical data sets, the push by regulated interests for legislation forcing researchers to turn over individual health records and painstakingly assembled raw data public raises both ethical and intellectual property concerns. Dr. Thurston offers the practical proposal that when science is likely to be used in highly politicized public policy decisions, the journals that publish relevant studies should insist that peer reviewers play a more active role in scientific quality assurance

Of course, the air standards are of interest only to scientists unless they are implemented. The very public campaign against more restrictive

standards for ozone and particles that was launched from inside the Beltway even before the EPA's proposals went to the Office of Management and Budget for interagency review was launched by the Air Quality Standards Coalition, an ad hoc group of trade associations including the National Manufacturers' Association, auto manufacturers, electric utilities, and other highly regulated industries, generated resolutions and letters from many local and state governments which had been actively engaged in politically painful efforts to comply with the old standards. The 1990 CAA Amendments compelled states with ozone violations to introduce reformulated gasoline and launch automobile inspection and repair programs, and added dozens of additional mandatory elements to State Implementation Plans. Marginal and moderate ozone nonattainment areas were rapidly coming into compliance with the 0.12 parts-per-million, one-hour standard and rejoicing in the prospect of reduced federal oversight. And, as F. William Brownell and Ross S. Antonson point out, most of the specific ozone program requirements hammered out by Congress in 1990 were expressly linked to the one-hour standard. Congress was clearly not focussed on Section 109(d)(1) of the CAA, requiring the Administrator to complete a "thorough review" of the criteria and standards every five years, nor is it likely that the members contemplated the possibility that the EPA might tighten the ozone standard. After all, the EPA last completed a review of the ozone standard in 1979, and at that time, as Dr. Lents outlines, the Agency relaxed the one-hour standard.

Brownell and Antonson detail the many implementation challenges the EPA faces in its effort to update the ozone and particle standards without slowing progress under the old standards or creating massive confusion. They are especially critical of the Agency's decision to focus attention on the role of nitrogen oxides emitted by large, coal-fired power plants in downwind states that create ozone violations in the eastern United States. Jason Grumet, to the contrary, describes how the problem of long-range ozone transport, which the EPA had begun to address through a novel multi-state process known as the Ozone Transport Assessment Group, gave the EPA the impetus to link the new ozone standard to a more aggressive approach to a group of sources that had previously escaped effective control.

Although the new eight hour concentration-based standard is easier for some areas to meet because the longer averaging time reduces the effect of very sharp spikes in ozone readings that occur during unusual summer heat conditions, suburban areas that barely meet the old standard will incur new planning requirements. But, as Grumet shows, ozone has no respect for political boundaries. Regional-scale control programs for

large sources must be added to localized controls on toxics, while national regulations will continually need to be updated to accommodate growth in the transportation sector, including long-haul trucks, airplanes, trains, and ships. From the evidence available, the particle control program that emerges after extensive monitoring and review of new health studies will need to incorporate measures that reflect the atmospheric formation and transport of the smallest particles. Ironically, the first test of a fine particle control program will come as a result of the EPA's decision to face up to its responsibility, dating back to the l977 CAA Amendments, to protect and restore visibility in national parks and wilderness areas.

The EPA's regional haze proposal, issued at the same time as the final ozone and particulate standards, addresses the problem of defining a visibility goal and building a program to move toward that goal. Vickie Patton and Bruce Polkowsky, the lawyer and technical expert directly responsible for developing the proposal, have produced a definitive history and lucid explanation of their approach. As the Grand Canyon Visibility Transport Commission process created in the 1990 CAA Amendments showed, there is strong support among state governors, Tribes, and the broader public in the West for new, preferably market-based, programs to address the problems of regional haze and visibility degradation. Similarly, Americans who visit their national parks in the East are often shocked to compare actual views with the vistas seen on old photos or postcards. Yet the resources devoted to visibility have been miniscule, reflecting the priority the EPA places on health protection and the difficulty of mounting a major effort to address an issue that even the environmental interest groups have not put at the top of their agenda.

By reinforcing that goal and adding deadlines for EPA action, Congress has set in motion a process that will focus primarily on light-scattering by fine particles—the very same pollutant for which the EPA has just set a national health standard. It remains to be seen whether state and federal agencies have the will to deal with growth as well as existing sources—especially diesel-burning engines and coal burners—so tourists can enjoy clear views of our national treasures.

A reader who takes in all the articles in this issue will have a fair picture of the challenges faced by the EPA in carrying out its responsibility to review the national air quality standards and assure the public that those standards protect public health, based on the best available science. In adopting the new standards, the Administrator took a bold step in reaffirming that public health should be the sole basis for setting the nation's primary clean air goals. When the CAA is reauthorized, Congress is likely to be under some pressure to require consideration of implementation costs before any new standards are set.

Yet despite the controversy about the goals, the EPA has been able to move forward in addressing two of the most stubborn problems that have evaded effective solutions for more than two decades—transport of ozone and regional haze. Whether the new standards can be implemented more rapidly and with less regulatory conflict than the old ones remains to be seen. The fact that the Administrator, with public backing from the White House, has given the air program strong new goals and a renewed commitment to the original public health mission of the CAA, means that the EPA and the country as whole can approach the myriad of implementation tasks with a clear sense of purpose.