Before the
United States Senate
Subcommittee on Clean Air and Nuclear Safety

Review of EPA's Proposed Revision to the Ozone NAAQS

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Thank you very much, Mr. Chairman and members of the subcommittee, for the opportunity to testify about the U.S. Environmental Protection Agency's proposed revisions to the nation's health-based ambient air quality standard for ground-level ozone.

My name is Vickie Patton. I am the Deputy General Counsel at Environmental Defense, a national non-partisan science-based environmental organization, where I manage national and regional air quality programs. I previously served as an attorney in the U.S. Environmental Protection Agency's Office of General Counsel under the George H.W. Bush and William Clinton administrations where I worked on a variety of Clean Air Act matters.

BIPARTISAN SUPPORT, EXTRAORDINARY ACHIEVEMENTS

The Clean Air Act is one of the nation's single most effective environmental statutes. Since its adoption in 1970, it has been a triumph of bipartisanship and healthier air.

Senator John Sherman Cooper, a Republican from Kentucky, captured the spirit of bipartisan cooperation that led to the United States Senate's historic – and unanimous – adoption of the Clean Air Act in 1970:

> We worked together. We disagreed. We worried about many provisions of the bill. At last, however, we joined unanimously in recommending and sponsoring this bill, believing that our approach was one that could make progress toward the solution of the problem of air pollution.

Senator Cooper was wise in his predictions.

The unanimous will of the United States Senate has secured healthier air for millions of Americans. The 1970 Clean Air Act embodies the great promise of the American system of law-making in practice. People of good will translated studious research and bold aspirations to writing, and changed history forever.

Through its judicious words, the 1970 Senate saved numerous lives and prevented countless illnesses. The bipartisan founders of the Clean Air Act enabled millions of children to realize their potential unencumbered by neurotoxic lead pollution, and for children across the land to share their precious childhood dreams with grandparents whose lives have been prolonged by reductions in air pollution.

THE CLEAN AIR ACT'S TWO-STEP PROCESS

Congress in 1970 established an effective process in the fight against air pollution. Congress commanded that the national ambient air quality standards be based on public health considerations alone. Then, economics are thoroughly considered in devising the air pollution control strategies to achieve the health standards. So the law is sharply focused in ensuring the nation's health-standards are established solely on the basis of public health, and this same law is broadly encompassing in considering economics when federal, state and local officials determine how to cost-effectively achieve the health standards.

PUBLIC HEALTH

Some in industry have long protested this carefully calibrated dual system. Some have argued that this two-step inquiry should be conflated rather than distinct, that the nation's health standards should be based on economics and then economics should likewise infuse the policies to achieve the standards. This argument has been thoroughly presented – and resoundingly rejected – over the past 37 years.

This question was answered by a unanimous Senate in 1970. The language crafted by Congress in 1970 is straight forward; its meaning is plain. The Administrator is instructed to establish standards that "are requisite to protect the public health" with "an adequate margin of safety."[1] The statute thus provides for the health-based standards to be based exclusively on public health and to be precautionary in safeguarding against adverse health effects.

This question has also been consistently answered by the decisions of prior EPA Administrators and numerous judicial decisions of the federal court of appeals in Washington, D.C.[2]

Ultimately, this question was emphatically answered by a unanimous Supreme Court. Justice Antonin Scalia, writing for the high Court, explained that the text of the Clean Air Act is clear notwithstanding the copious arguments of industry lawyers: "Were it not for the hundreds of pages of briefing respondents have submitted on the issue, one would have thought it fairly clear that this text does not permit the EPA to consider costs in setting the standards."[3]

Justice Scalia then set forth the inquiry the Administrator must make in establishing the nation's health-based air quality standards on the basis of science:

> The EPA, 'based on' the information about health effects contained in the technical 'criteria'

> documents compiled under §108(a)(2), 42 U.S.C. §7408(a)(2), is to identify the maximum airborne concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an 'adequate' margin of safety, and set the standard at that level. Nowhere are the costs of achieving such a standard made part of that initial calculation.[4]

Accordingly, in setting the health-based air quality standard for ozone, Administrator Johnson must be steadfast–and unwavering–in basing his decision exclusively on what is requisite to protect the public health with an adequate margin of safety.

ECONOMICS

After the standards are established, the Clean Air Act provides a prominent role for consideration of costs in national, state and local decisions about the pollution control strategies deployed to achieve the health standards. EPA is not only empowered to consider costs in setting emission limits for cars, SUVs, trucks, buses, construction equipment, lawnmowers, aircraft, fuels, power plants, and industrial facilities but it is expressly *required* by law to do so.[5]

States and local governments, in turn, are distinctly responsible for designing the air quality management plans for their communities and entrusted with determining how the clean up burden is allocated. Justice Scalia succinctly explained that "[i]t is to the States that the Act assigns initial and primary responsibility for deciding what emissions reductions will be required from which sources."[6]

THE RESULTS

In practice, the two-step process forged in 1970 has been integral to the enduring success of the Clean Air Act. By any measure, the achievements under the national ambient air quality standards have been profound.

Emissions Reductions and Economic Growth

Under this two-step process, America has dramatically reduced the emissions that contribute to the national ambient air quality standards while the economy has grown.

- Lead emissions have been slashed some 98 percent since 1970.
- Volatile organic compounds, which form ground-level ozone and are often comprised of toxic contaminants, have been reduced by over 50 percent since 1970.
- Sulfur dioxide, which transforms into deleterious particulate pollution, has also been cut in half since 1970.

- Nitrogen oxides, which are implicated in the formation of ground-level ozone and particulate pollution, have been lowered nearly one quarter since 1970.

During the period that these remarkable emissions reductions have occurred, gross domestic product has risen some 174 percent.[7]

Summary of pollution levels and economic growth since 1970 Clean Air Act

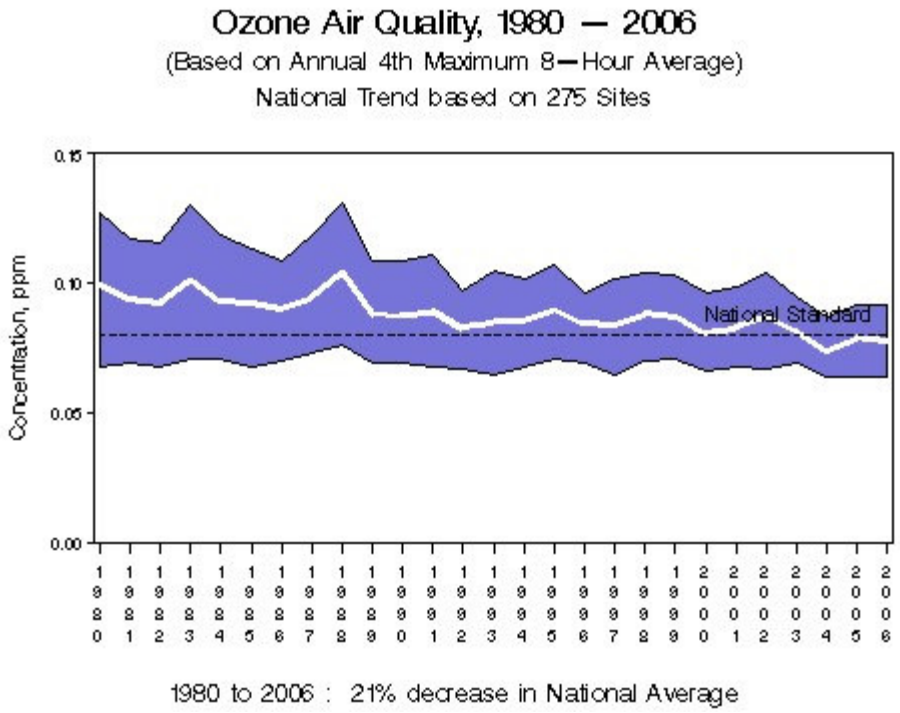
Indicator	Pollution cuts since 1970	Percent change
Oxides of nitrogen (NO_x)	6.4 million tons annually	23.8% decrease
Volatile organic compounds (VOC)	18.3 million tons annually	54.3% decrease
Particulate matter (PM)	9.1 million tons annually	74.6% decrease
Sulfur dioxide (SO_2)	15.4 million tons annually	49.4% decrease
Lead	0.22 million tons annually	98.5% decrease
Carbon monoxide (CO)	104 million tons annually	52.5% decrease
Gross Domestic Product		174% increase

Restoring Healthy Air in Communities and Neighborhoods

Similarly, communities with pollution concentrations above the national ambient air quality standards have reduced pollution, saved lives, prevented respiratory diseases and made enormous strides in restoring healthy air.

- Carbon Monoxide. In 1971, when the carbon monoxide health standards were established, 53 out of 58 air quality monitors recorded violations. In 2000, only four monitors in the country exceeded the standards.[8] EPA estimates that the average ambient carbon monoxide concentration in 2001 was 62 percent lower than it was in 1982. The 2001 carbon monoxide levels were the lowest recorded in 20 years.[9] Reductions in carbon monoxide pollution have yielded dramatic returns for health and quality of life by preventing thousands of deaths. The Centers for Disease Control and Prevention estimate that approximately 11,700 deaths from accidental, acute exposures to carbon monoxide were avoided between 1968 and 1998 as a result of the strict vehicle emissions standards for carbon monoxide.[10]

- Ozone. In 2004, EPA identified some 126 communities across the nation with air pollution concentrations above the ozone health standard adopted in 1997. Today, based on preliminary air quality data, EPA estimates that all but 35 of those areas have ozone concentrations that meet that health standard. Since 1980, peak ozone concentrations monitored at some 275 sites across the country have declined by more than 20 percent.[11] These pollution reductions have prevented hospital admissions and school absences for respiratory illnesses, and have saved lives.



Health Benefits and Costs

The health benefits secured – each year – due in predominant measure to the national ambient air quality standards under the Clean Air Act are extensive.

- In the late 1970s, nearly every child in America—88.2 percent—had blood lead levels higher than the level of concern established by the Centers for Disease Control and Prevention. By 2000, after the full phase-out of leaded gasoline, 2.2 percent of American children had blood lead levels exceeding the level of concern.[12]

- Each year, the Clean Air Act prevents well over 200,000 premature deaths, more than 650,000 cases of chronic bronchitis, over 200,000 hospital admissions, more than 200 million respiratory ailments, and over 22 million lost work days.[13]

- The monetary benefits to society have outweighed the costs by a factor of more than 40:1.[14]

Technological and Economic Innovation

Technological innovation has made these far-reaching gains in reducing air pollution and protecting public health possible at far less cost than originally anticipated.

- Carbon monoxide is caused by incomplete combustion of gasoline in passenger cars and trucks. Pollution levels were reduced through improved catalytic converters, fuel injection systems and oxygenated fuels.

- In the 1970s, the automakers warned of grave economic consequences if they were required to place catalytic converters in new cars. Today, every car manufactured is equipped with a catalytic control device to reduce tailpipe emissions.

- In 2002, DuPont developed paints and industrial coatings for Daimler Chrysler's coating operation, such as the "Super High Solid" clear coat, that emit few, if any, ozone-forming volatile organic compounds.

- Selective catalytic reduction technologies, deemed infeasible in the early 1990s, are now broadly achieving 90 percent NOx removal from existing coal plants in the East thereby lowering ozone and particulate pollution.

- Diesel desulfurization and fluid catalyst cracking technologies have enabled ultra low sulfur diesel fuels and dramatically reduced emissions of particulates, NOx and sulfur dioxide.

- Scrubber technology to remove sulfur dioxide from power plant stack gases is now deployed at a fraction of the costs predicted during the debate over the 1990 Clean Air Act amendments, and wet scrubbers can now achieve 98 percent sulfur dioxide control.

- In 2001, EPA established rigorous particulate pollution emission standards for new diesel trucks and buses, based on the use of catalyzed diesel particulate filters, after a public rulemaking process in which engine manufactures questioned the timing and stringency. Today, new diesel truck and bus engines rolling off the assembly line have dramatically lower particulate pollution.

- In 1994, automobile manufacturers estimated the cost of advanced low emission vehicles would be in excess of $1,500.[15] One year later, Honda placed a Civic subcompact model on the market that emitted less than half of what was permitted under California law, at a cost of $100.[16]

EPA estimates that the suite of innovative technologies, processes and products that have been developed to meet the nation's air quality standards and other Clean Air Act programs have not only delivered extraordinary results but that the nation's pollution control industry has thrived, generating over $200 billion in revenues and supporting more than 3 million jobs.[17]

Telling the Public Whether the Air is Safe to Breathe

The two-step system of air quality management adopted in 1970 ensures that the nation's health standards will be based, exclusively, on health science. This system of air quality management

puts the nation's very best scientists at the forefront while provisionally relegating the economists, lobbyists and lawyers to the backburner. Most importantly, however, this system of air quality management provides American families with a transparent and unmitigated science-grounded benchmark for determining whether the air in their neighborhood or community is safe to breathe. And it leaves ample room for the economists and the lawyers and the lobbyists to argue subsequently, in a variety of forums, to what extent society should invest in restoring healthy air.

In sum, the Clean Air Act has been vigorously tested over the past 37 years and it has delivered robust results. Central to its success is the two-part inquiry in which the consideration of costs is not commingled with the establishment of the national ambient air quality standards on the basis of public health. As Justice Scalia explained for a unanimous Supreme Court, conflating costs with public health in setting the standards may altogether eliminate protection against adverse health effects: the consideration of costs "is *both* so indirectly related to public health *and* so full of potential for canceling the conclusions drawn from direct health effects."[18]

EPA'S PROPOSED OZONE DECISION

The Administrator, in making his final decision on the ozone NAAQS due March 12, 2008, must establish standards that "are requisite to protect the public health" with "an adequate margin of safety."[19] There are, however, grounds for concern about the direction EPA's final decision will tack notwithstanding this plain statutory mandate and the nation's time tested air quality management system.

Retaining the Current Health Standard is Not Supported by Science and Would Continue to Put Large Numbers of Individuals at Risk

The EPA Clean Air Scientific Advisory Committee unanimously and unambiguously advised EPA Administrator Stephen Johnson: "(1) There is no scientific justification for retaining the current primary 8-hr NAAQS of 0.08 parts per million (ppm), and (2) The primary 8-hr NAAQS needs to be substantially reduced to protect human health, particularly in sensitive subpopulations."[20] The Committee also unanimously agreed upon a recommended range: "Therefore, *the CASAC unanimously recommends a range of 0.060 to 0.070 ppm for the primary ozone NAAQS*."[21] These recommendations leave no room for misinterpretation.

But EPA has nevertheless expressly held open the prospect of retaining the current health standard for ozone unchanged, and EPA explicitly seeks public comment on such an outcome. The CASAC squarely addressed this matter and pointedly found that "*there is no longer significant scientific uncertainty regarding CASAC's conclusion that the current 8-hr primary NAAQS must be lowered*" and "[r]etaining this standard would continue to put large numbers of individuals at risk" –

> *[T]here is no longer significant scientific uncertainty regarding the CASAC's conclusion that*

the current 8-hr primary NAAQS must be lowered. A large body of data clearly demonstrates adverse human health effects at the current level of the 8-hr primary ozone standard. Retaining this standard would continue to put large numbers of individuals at risk for respiratory effects and/or significant impact on quality of life including asthma exacerbations, emergency room visits, hospital admissions and mortality.[22]

In sum, CASAC unequivocally found that there is no basis in public health considerations for EPA to retain the current standard. EPA nevertheless persists in considering this flawed option.

OMB Instructed EPA to Delete References to Ozone Mortality Benefits in Important Recent Rulemakings Under the Clean Air Act

The scientific evidence of mortality benefits is one of the significant scientific developments since EPA's 1997 decision to lower the ozone health standard. The CASAC expressly pointed to the studies on ozone mortality effects as part of the body of evidence documenting adverse health effects below the current health standard. The CASAC found:

- "Several new single-city studies and large multi-city studies designed specifically to examine the effects of ozone and other pollutants on both morbidity and mortality have provided more evidence for adverse health effects at concentrations lower than the current standard."[23]

- "[A]dverse health effects due to low-concentration exposure to ambient ozone (that is, below the current primary 8-hour NAAQS) found in the broad range of epidemiologic and controlled exposure studies cited above include . . . an increase in mortality (non-accidental, cardiorespiratory deaths) reported at exposure levels well below the current standard."[24]

- "Retaining this [the current] standard would continue to put large numbers of individuals at risk for . . . mortality."[25]

CASAC's series of statements in its October 24, 2006 correspondence to the Administrator placed CASAC's full force, unanimously, on the evidence of mortality and other health effects in compelling EPA to adopt a lower standard to protect public health with an adequate margin of safety. But, only a few moths thereafter, OMB was moving in the opposite direction, instructing EPA staff to remove ozone mortality benefits from major rulemaking initiatives involving reductions in ozone-forming pollution.

Appendix A attached contains three emails between EPA staff and OMB in the context of a draft rulemaking proposal to lower ozone-forming pollutants and other contaminants from diesel locomotives and commercial ships.[26] The first email, dated January 17, 2007, from EPA staff to Mr. David Rostker at OMB, transmits the discussion of ozone mortality that EPA "plan[s] to include in the RIA for the proposed Locomotive and Marine Engine Rule."[27] The EPA staff

member further explains that "[m]any Agency staff have contributed to this version, including representatives from OAQPS, OPEI, ORD, and OPAR."[28] On February 22, 2007, EPA staff sends a follow up note to Mr. Rostker at OMB describing the current status of discussions with OMB: "As best we know, the only open issues/comments are ozone mortality and your question about idle reduction."[29] The very next day, EPA staff sends an email to Mr. Rostker, of OMB, now reporting that the discussion of ozone mortality benefits will be removed from the both the preamble to the rule and the draft Regulatory Impact Analysis: "The text below was written to address the fact that we aren't including ozone benefits (mortality or otherwise) in our analysis. The same paragraph will be included in both the preamble and the RIA. For now, however, I'm pasting it below for your review."[30] The implication is clear. OMB rejected EPA's language analyzing the ozone mortality benefits as part of the basis for an important national rulemaking, and did so only months after CASAC recognized the powerful force of the studies associating ozone and death.

The process repeated itself the very next month. During the development of another important rule, EPA staff responded to an email from Mr. David Rostker at OMB flagging his objections to quantified ozone mortality benefits in the draft Regulatory Impact Analysis. The EPA response to OMB's objection states: "We have removed all references to quantified ozone benefits (including mortality) in the most recent version of the ES."[31] The rulemaking in questions involved proposed new emission standards to limit the ozone-forming pollution from gasoline-powered lawnmowers, handheld garden engines, and marine sterndrive engines.[32]

OMB Transmitted Significant 11th Hour Language Changes to Weaken the Rule That were Incorporated Into EPA's Formal Ozone NAAQS Proposal

EPA was under a court-supervised deadline to issue its proposal regarding the ozone NAAQS by June 20th. The public docket shows that on that day, OMB transmitted a series of inserts to EPA that altered, and materially weakened, the proposal in the following significant respects:

- The first page of the fax from OMB contains excerpts from Justice Breyer's concurring opinion in *Whitman v. American Trucking Assns, Inc.* OMB presents the language to EPA as the basis for the Agency to avoid the majority opinion of the United States Supreme Court. The explanatory language at the top of the fax states: "EPA could follow the direction of *a* Supreme Court Justice without fear of contempt, especially if (as OIRA pointed out) the EPA risk assessment finds little health improvement nationwide."[33] Justice Breyer's language was in fact incorporated on pages 11-12 of the final proposal now posted on EPA's website at: http://www.epa.gov/ttn/naaqs/standards/ozone/data/2007_06_o3npr.pdf

- The second page of this same fax from OMB contains language laying out the rationale for EPA to retain the current ozone health standard without changes based on a host of "uncertainties" provided by OMB. This OMB transmitted language, which was incorporated in substantial part in EPA's preamble, reads as follows: "The Administrator recognizes that there is a concern that adopting a more stringent 8-hour standard now, without a better understanding of the health effects associated with O3

exposure at these lower levels, will have an uncertain public health payoff. These questions include uncertainty in (1) the exposure estimates, (2) the estimation of concentration-response associations in epi studies, (3) the potential role of co-pollutants in interpreting the reported associations in these epi studies, and 4) [sic] the effect of background concentrations. In fact, the Agency continues to undertake a substantial research program in an effort to clarify some of these uncertainties. As a result, the Administrator acknowledges the possibility that it would be appropriate to consider modifications of the 8-hour standard with a more complete body of information in hand rather than to initiative a change in the standard at this time." This language was incorporated in significant respects at page 252 of the final proposal now posted on EPA's website. The OMB transmitted litany of uncertainties associated with health effects below the current standard is in direct contrast with CASAC's unwavering unanimous statements, recounted above, that there are a suite of adverse health effects below the current standard that compel EPA action and that there is no longer significant scientific uncertainty that the standard must be lowered.

- The final document in the fax from OMB to EPA invokes three separate strands of argument in seeking to buttress EPA's case for inaction. First, the OMB language argues, paradoxically, that the sluggish implementation pace of the current ozone health-standard should delay a new health standard. Second, OMB maintains that the likely delays in achieving a more protective health standard preclude the Administrator from considering the health benefits of lower ozone and, therefore, lowering the health standard will not realize public health gains. Third, it is claimed that the nation's alternative fuels program may supersede the Administrator's duty to establish standards requisite to protect public health with an adequate margin of safety. On this latter point, the language that appears in final form on pages 251-52 expressly cross-references back to Justice Breyer's concurrence, thereby completing the circle with the first insertion above. The actual final language incorporated at OMB's behest provides: "The Administrator is mindful that the country has important goals related to the increase production and use of renewable energy, and that these new energy sources can have important public health, environmental and other benefits, such as national security benefits. In some contexts and situations, however, the use of renewable fuels may impact compliance with a lowered ozone NAAQS standard. For example, the Agency recently promulgated final regulations pursuant to section 211(o) of the Clean Air Act, which was enacted as part of the Energy Policy Act of 2005. This provision requires the use of 7.5 billion gallons of renewable fuel by 2012, a level which will be greatly exceeded in practice. In the Regulatory Impact Analysis which accompanied the renewable fuel regulations, the Agency recognized the impact of this program on emissions related to ozone, toxics and greenhouse gases and otherwise reviewed the impacts on energy security. The Administrator requests comment on such factors and any relationship to this rulemaking, including the extent of EPA's discretion under the Clean Air Act to take such factors into account (see section I.A)." This final portion of the OMB fax was incorporated in large part at pages 251-52 of the final proposal now available on EPA's website.

While the nation's interest in renewable fuels is well-understood, OMB's language inverts the public health protection mandate of the law. OMB's approach would supersede the statute's directive to establish NAAQS that protect public health with an adequate margin of safety for ozone, particulate pollution, lead or any other pollutant by invoking a favored industrial activity or process. In such an illogical world, emissions would inexorably rise as the nation's health standards are adjusted upward to accommodate more pollution.

The rushed OMB fax, which was belatedly inserted into EPA's formal proposal, provides an array of technical, policy and legal arguments designed to justify EPA inaction OMB also pressed for inclusion of the language in the Administrator's own voice. In one revealing passage, the OMB transmitted fax asks whether it is "Possible to include as Administrator's voice or somewhere other than the five pages of input from 'commenters'?"

The Clean Air Scientific Advisory Committee Issued a Unanimous, Clarion Call for the Administrator to Adopt an Ozone Standard More Protective of Public Health

The CASAC has unanimously called for a more protective health standard. It has unambiguously advised EPA that there is no scientific basis for retaining the current health standard. But some political forces have directly commanded important aspects of EPA's proposal.

Today, Administrator Johnson holds the trust of healthier air in his hands. Like the Administrators that preceded him, he is confronting powerful headwinds. We respectfully ask that Administrator Johnson follow the path of science in protecting human health, that he heed the course charted by EPA's own unanimous 23 member independent science advisory committee, and that he be guided by EPA's own professional staff in continuing the nation's critical race for healthier air. We ask that he carry forward the legacy entrusted to him under the Clean air Act to protect human health from ground-level ozone with an adequate margin of safety.

ECHOES FROM THE PAST

In 1997, EPA strengthened the nation's particulate matter and ozone health standards in response to new science. EPA's decision engendered claims of economic demise and social havoc from representatives of industry and members of Congress.

- "So economically you are strangled, you are hung up, you are not going to grow, jobs will not occur." Congressman Ronald Klink.[34]

- The new standards "will wreak havoc on economic growth, jobs, and even personal lifestyles." Congressman Fred Upton.[35]

- "Dry cleaning establishments, hair salons, and other small businesses will not be able to absorb the increased costs imposed by these regulations." Senator Spencer Abraham.[36]

These claims are not dissimilar from arguments being made now about ozone. But, during the 1997 debate, Senator Max Baucus provided perspective on the predictable cycle of discourse that ensues from EPA's decision to strengthen the nation's air quality standards. He recounted the inevitable prognostications of economic demise. He also explained a world where, in the final analysis, costs are in fact reasonable and millions breathe cleaner air:

> This is a familiar pattern. Air quality standards have always been met with claims of economic demise. But then technology catches up. Innovative programs are implemented. Further research bolsters the initial decision. In the end, costs are a fraction of initial claims, and everyone breathes cleaner air.

A BIPARTISAN AMERICAN LEGACY

I leave you with the retrospective of former Senator Howard Baker, Jr., who reviewed the historic Clean Air Act legacy forged through the bipartisanship of the 1970 United States Senate and gave life to a law "which more than well demonstrated that the whole is greater than the sum of its parts."

> Retrospectives are interesting for people of my generation. There are many ways to sum up our careers. Many Members of Congress do that with the myriad pictures and awards they display on the walls of their offices. Others summarize their career by pointing to their elective and appointive achievements. Needless to say, mine has been bountiful thanks to my parents, the people of Tennessee, President Ronald Reagan and President George W. Bush.
>
> But at the end of the day, those personal achievements and rewards will be of most importance to my descendants and, hopefully, to my biographers. They will be measures of my success, but they won't reflect the achievement of which I am most proud. But so long as the Clean Air Act, its principles and goals survive, I will have a lasting legacy.
>
> I have always been struck by the fact that Thomas Jefferson insisted that his tombstone reflect only that he had founded the University of Virginia—not that he was Ambassador to France—or Secretary of State—or Vice President or even President of the United States—not that he had drafted the Declaration of Independence, but that he had founded an institution of higher learning.
>
> I cannot compare my own career to Jefferson's, nor would I be so bold to say that I alone wrote the Clean Air Act. But I am willing to say and let my legacy rest on the fact that I was one of two or three American citizens who happened to be United States Senators who came together at a particular moment in history and developed the concept which in many respects can be said to have changed the world in which we live.

> In 1969 Senator Ed Muskie and I came together with a shared vision. We each provided critical elements to that vision and we succeeded in producing a law which more than well demonstrated that the whole is greater than the sum of its parts.[37]

Basing the nation's health-based air quality standards on public health concerns is, singularly, the most important principle woven into the vibrant fabric of the bipartisan Clean Air Act. The resulting benefits for healthier air have in fact changed the world in which we live.

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[1] Clean Air Act §109(b)(1), 42 U.S.C.§7409(b)(1).
[2] See *Lead Industries Assn., Inc. v. EPA,* 647 F.2d 1130 (D.C. Cir. 1980); *American Lung Assn. v. EPA*, 134 F.3d 388 (1998); *NRDC v. Administrator, EPA,* 902 F.2d 962 (D.C. Cir. 1990), vacated in part on other grounds, *NRDC v. EPA,* 921 F.2d 326 (D.C. Cir. 1991); *American Petroleum Institute v. Costle,* 665 F.2d 1176 (D.C. Cir. 1981).
[3] *Whitman v. American Trucking Assns., Inc.,* 531 U.S. 457, 465 (2001).
[4] *Id.* (emphasis added).
[5] 42 U.S.C. §§7521(a), 7547(a), 7545, 7541, and 7411(a).
[6] *Whitman v. American Trucking Assns., Inc.,* 531 U.S. at 470.
[7] Department of Commerce, Gross Domestic Product (2005).
[8] National Research Council, Committee on Carbon Monoxide Episodes in Meteorological and Topographical Problem Areas. *Managing Carbon Monoxide Pollution in Meteorological and Topographical Problem Areas,* National Academies Press (2003).
[9] U.S. EPA, "National Air Quality; 2001 Status and Trends" (Sept. 2004).
[10] Mott JA, Wolfe MI, Alverson CJ, Macdonald SC, Bailey CR, Ball LB, Moorman JE, Somers JH, Mannino DM, Redd SC. "National Vehicle Emissions Policies and Practices and Declining US Carbon Monoxide-Related Mortality," *JAMA*, 299 (2002) 988-995.
[11] U.S. EPA, The Ozone Report, *Measuring Progress through 2003,* (Nov. 17, 2005).
[12] Centers for Disease Control and Prevention, Executive Summary, *Third National Report on Human Exposure to Environmental Chemicals* (2005).
[13]U.S. EPA, "The Benefits and Costs of the Clean Air Act, 1970 to 1990," (Oct. 1997)
[14]*Id.*
[15] Sierra Research, Inc., "The Cost Effectiveness of Further Regulating Mobile Source Emissions," Feb. 28, 1994.
[16] The New York Times, "Honda Meets a Strict Emission Rule," August 30, 1995.
[17] Prepared for EPA by ICF Consulting, *The Clean Air Act Amendments: Spurring Innovation and Growth While Cleaning the Air,* (Oct. 27, 2005).
[18] *Whitman v. American Trucking Assns., Inc.,* 531 U.S. at 469.
[19] Clean Air Act §109(b)(1), 42 U.S.C.§7409(b)(1).
[20] Dr. Rogene Henderson, Chair, CASAC, to Stephen Johnson, EPA Administrator, "Clean Air Scientific Advisory Committee's (CASAC) Peer Review of the Agency's 2nd Draft Ozone Staff Paper," (Oct. 24, 2006).
[21] *Id.* at 2 (italics in original).
[22] *Id.* at 5 (italics in original).
[23] *Id.* at 3 (citations omitted).
[24] *Id.* at 4.
[25] *Id.* at 5.
[26] The notice of proposed rulemaking was formally published on April 3, 2007, 72 Fed. Reg. 15,938.
[27] EPA Staff Email to David Rostker, OMB (Jan. 17, 2007), Appendix A.
[28] *Id.*
[29] EPA Staff Email to David Rostker, OMB (Feb. 22, 2007), Appendix A.
[30] EPA Staff Email to David Rostker, OMB (Feb. 23, 2007), Appendix A.
[31] EPA Staff Email to David Rostker, OMB (March 29, 2007), Appendix B.
[32] 72 Fed. Reg. 28,098 (May 18, 2007).
[33] OMB Interagency Fax, available at EPA-HQ-OAR-2005-0171-0215, p. 1, Appendix C (emphasis added).

[34] 143 *Cong. Rec.* 3560 (1997).
[35] 143 *Cong. Rec.* 1286 (1997).
[36] 143 *Cong. Rec.* S10813 (1997).
[37] Remarks by Howard H. Baker, Jr., "Cleaning America's Air—Progress and Challenges," The University of Tennessee, Knoxville, March 9, 2005.