EPA'S PARTICULATE MATTER AND OZONE RULEMAKING: IS EPA ABOVE THE LAW?

HEARINGS

BEFORE THE

SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES, AND REGULATORY AFFAIRS

OF THE

COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT HOUSE OF REPRESENTATIVES

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EPA'S PARTICULATE MATTER AND OZONE RULEMAKING: IS EPA ABOVE THE LAW?

WEDNESDAY, APRIL 16, 1997

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH,
NATURAL RESOURCES, AND REGULATORY AFFAIRS,
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:45 a.m., in room 2154, Rayburn House Office Building, Hon. David McIntosh (chairman of the subcommittee) presiding.

Present: Representatives McIntosh, Sununu, Scarborough, Snowbarger, Sanders, Tierney, Turner, Condit, and Kucinich.

Ex officio present: Representatives Burton and Waxman.

Staff present: Mildred Webber, staff director; Todd Gaziano, chief counsel; J. Keith Ausbrook and Larisa Dobriansky, senior counsels; Karen Barnes, professional staff member; Cindi Stamm, clerk; Phil Schiliro, minority staff director; Phil Barnett, minority chief counsel; Elizabeth Mundinger, minority counsel; and Ellen Rayner, minority chief clerk.

Mr. MCINTOSH. The House Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs will come to order. After consulting with Mr. Sanders, each side will have 10 minutes of opening remarks that they can allocate however they wish, and then we'll proceed to our first panel of witnesses. On our side, I believe I'm the only Member with opening remarks, and so I'll proceed.

The purpose of today's hearing is to determine whether EPA has engaged in an illegal rulemaking procedure to impose burdensome new standards for particulate matter and ozone. We also will hear from a variety of witnesses on what such an illegal rulemaking means for America. Let me be clear. A great deal has been reported on EPA's proposal that indicates that it is, in fact, an illegal rulemaking and that there may be a terrible price to pay in terms of human health if the Agency does not begin over and follow the law.

Despite the grave implications of its proposals, EPA's rulemaking has several problems. It has violated the Regulatory Flexibility Act. The Agency refused to fully evaluate the impact of its proposed rules on small businesses, as required by the Regulatory Flexibility Act, despite an authoritative finding by the controlling legal authority at the Small Business Administration, that EPA is required to do so.

EPA has violated the Unfunded Mandates Act. They refuse to fully evaluate the impact of its proposed rules on small businesses,

as required by that act. The Agency also refused to adequately involve State and local officials in the development of new standards. Specifically, EPA refused to conduct a complete cost-benefit analysis or to select the most cost-effective option among all the reasonable alternatives that achieve the objectives of the Clean Air Act.

EPA has refused to validate the key studies on which the Agency is relying, by having the underlying data released for independent review. EPA appears to have collaborated with OMB to impose a gag order on other agencies' written concerns on the proposed rules. And EPA has refused to allow an adequate opportunity for public comment on its proposed rules or to allow an adequate opportunity for regulatory review under President Clinton's regulatory review Executive order. Not only has EPA refused to complete these required analyses, but the Agency has also ignored the scientific findings of its own Clean Air Act scientific advisory committee.

While the Agency maintains that its standards must be health-based, EPA's own scientific experts, such as Dr. George Wolff, who testified before the Small Business Committee, have said that there is no scientific proof that the proposed rules will, indeed, improve public health. I ask unanimous consent that Dr. Wolff's testimony be put into the record.

[The prepared statement of Dr. Wolff follows:]

GEORGE T. WOLFF

CHAIR, EPA'S CLEAN AIR SCIENTIFIC ADVISORY COMMITTEE'S PANELS ON OZONE AND PM

SUMMARY

The selection of the an 8-hour ozone and a 24-hour and annual and $PM_{2.5}$ NAAQSs is consistent with the advice given to EPA by the Clean Air Scientific Advisory Committee (CASAC). The choice of the level of the ozone standard is consistent within the range endorsed by CASAC, but CASAC stated that the selection of a specific level within the range was strictly a policy judgment. CASAC panel members could come to no consensus on the appropriate ranges or levels for $PM_{2.5}$ standards.

In the closure report to the EPA Administrator, CASAC concluded that "the weight of the health effects evidence indicates that there is no threshold concentration for the onset of biological responses due to exposure to ozone above background concentrations." CASAC then reviewed EPA's quantitative risk assessments. Although EPA's analysis showed differences among the various standard levels, CASAC stated that "the ranges are not reflective of all of the uncertainties associated with the numerous assumptions that were made to develop the estimates." As a result CASAC concluded: "there is no "bright line" which distinguishes any of the proposed standards (either the level or the number of allowable exceedences) as being significantly more protective of public health." They further state: "Consequently, the selection of a specific level and number of allowable exceedences is a policy judgment." This means that the decisions to select a given level or number of allowable exceedances within their proposed ranges cannot be based on science.

Having said that, eight members expressed their "personal preferences" for the level and number of allowable exceedances. All eight favored multiple exceedances. Three members preferred 0.08 ppm, three members preferred 0.09, one member said 0.08 or 0.09 ppm and one member said 0.09 or 0.10 ppm. The health effects experts were equally divided as well. Clearly, this is not an endorsement for a 0.08 ppm standard.

The 21 members of the CASAC PM review panel expressed a tremendous diversity of opinion and this is documented in Table 7 which is reproduced from the closure report. Pertaining to the 24-hour $PM_{2.5}$ NAAQS, only five members recommended a range which included 50 $\mu g/m^3$ or lower. Four members recommended greater than or equal to the top of EPA's range. Four members did not recommend a 24-hour NAAQS. The remaining eight members merely endorsed the concept of a 24-hour $PM_{2.5}$ NAAQS, but declined to select a value or range. Also note from the Table that the diversity of opinion was exhibited by the health experts as well as the non-health experts. Clearly, this is not an endorsement of a 50 μ/m^3 standard.

For the annual standard, only two members favored a range that went as low as 15 $\mu g/m^3$. Two members favored 20 $\mu g/m^3$; one chose 20 - 30 $\mu g/m^3$; two chose 25 - 30 $\mu g/m^3$; and eight did not think an annual $PM_{2.5}$ NAAQS was needed. The remaining six members merely endorsed the concept of an annual standard but declined to select a value or range. This is not an endorsement of an annual $PM_{2.5}$ NAAQS of 15 $\mu g/m^3$.

LEGISLATIVE BACKGROUND

In 1963, the Clean Air Act (CAA) was passed by Congress directing the then Department of Health Education and Welfare to prepare "Criteria Documents" which would contain summaries of the scientific knowledge on air pollutants arising from widespread sources. The 1970 CAA required the EPA Administrator to set National Ambient Air Quality Standards (NAAQS) for the identified "criteria" pollutants and gave the Administrator the authority to revise the NAAQSs in the future and to set additional NAAQSs as needed. At that time, 6 air pollutants were designated as criteria pollutants: photochemical oxidants (later became ozone), sulfur dioxide, non-methane hydrocarbons (later dropped as a criteria pollutant category), nitrogen dioxide, carbon monoxide, and total suspended particulate (later changed to PM_{10} which includes only particles with an aerodynamic diameter less than or equal to 10 microns). In 1971, EPA established NAAQSs for all six.

The absence of a mechanism for a periodic reassessment of the initial NAAQSs, prompted Congress to add into the 1977 CAA amendments a requirement that the NAAQSs be reevaluated every five years. In addition, the 1977 amendments created a new committee --the Clean Air Scientific Advisory Committee (CASAC), to review the periodic reevaluations. Organizationally, CASAC is housed within EPA's Science Advisory Board (SAB)[1] and functions as one of the ten standing committees of the SAB. However, unlike most of the other standing committees of the SAB, CASAC reports

directly to the EPA Administrator rather than through the Executive Committee of the SAB.

Congress specified a number of responsibilities for CASAC. One was to provide independent advice on the scientific and technical aspects of issues related to the criteria for air quality standards. The CASAC charter[2] states some of their functions:

> Not later than January 1, 1980, and at five year intervals thereafter, complete a review of the criteria published under section 108 of the Clean Air Act and the national primary and secondary ambient air quality standards and recommend to the Administrator any new national ambient air quality standards or revision of existing criteria and standards as may be appropriate.
>
> Advise the Administrator of areas where additional knowledge is required concerning the adequacy and basis of existing, new, or revised national ambient air quality standards.
>
> Describe the research efforts necessary to provide the required information.
>
> Advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and
>
> Advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

Previous activities of CASAC prior to 1985 have been summarized by Lippmann.[3]

Concerning the membership of CASAC, the charter states:

> The Administrator will appoint a Chairperson and six members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies for terms up to four years. Members shall be persons who have demonstrated high levels of competence, knowledge, and expertise in the scientific/technical fields relevant to air pollution and air quality issues.

For any NAAQS review, a CASAC Panel is constituted to conduct the review. A Panel consists of the seven regular members plus a sufficient number of consultant members so that the broad spectrum of expertise needed to fully assess a particular issue is covered on the Panel. These consultants are generally selected from EPA's Science Advisory Board (SAB)[1] or from a pool of about three-hundred consultants maintained by the SAB. However, certain issues have required going outside of the SAB and the SAB consultant pool to obtain a particular expertise. For the ozoneNAAQS review, the panel consisted of fifteen individuals including physicians, epidemiologists, toxicologists, atmospheric scientists, plant biologists, risk assessment experts and an economist. For the PM review, the panel consisted of 21 scientists.

THE NATIONAL AMBIENT AIR QUALITY STANDARDS

There are two types of NAAQS: primary and secondary. Primary NAAQS are set to protect human public health. Secondary NAAQS are set to protect against adverse welfare effects which include protection of plants, animals, ecosystems, visibility, etc. Primary NAAQS are required to be set at a level that protects public health with an adequate margin of safety for the benefit of any sensitive sub-populations. This is the paradigm CASAC has operated under since it conception.

In considering the appropriate level for a secondary standard, cost/benefit analysis can be considered, and in fact, is generally the limiting factor in the selection of a secondary NAAQS.

THE OZONE REVIEW PROCESS

The major steps in the NAAQS review process are illustrated for ozone in Table 1. EPA began drafting the Criteria Document (CD), which summarizes all of the relevant science on the sources, chemistry, effects, etc. of ozone, in the middle of 1993. Recent Criteria Documents have become mammoth undertakings. The first ozone Criteria Document,[4] published in 1970, summarized the relevant science in 200 pages. The present Criteria Document[5] is a three volume set and contains over 1500 pages. A draft Criteria Document was sent to the CASAC Panel in June of 1994.

The Staff Paper (SP) contains the Agency's recommendations for the range and form of the NAAQS along with the justifications for the recommendations that are drawn from material contained in the Criteria Document. In the past, the CASAC review of a Criteria Document was completed before the Staff Paper was written so that the Staff Paper would reflect the science contained in the final Criteria Document. The reviews of both the Criteria Document and Staff Paper are iterative processes that usually involve two to three revisions to both of the documents before CASAC reaches closure, and, in the past, the entire process took several years to complete. However, this review was on an accelerated schedule because of a previous lawsuit filed by the American Lung Association (ALA). In the previous review, CASAC came to closure on the Staff Paper in 1989. When EPA failed to complete the last two steps listed in Table 1 by October of 1991, the ALA and other plaintiffs filed a suit to compel EPA to complete its review. The U.S. District Court for the Eastern District of New York subsequently issued an order requiring the EPA Administrator to announce its proposed decision by August 1, 1992 and its final decision by March 1, 1993. EPA's decision was to retain the existing 1-hour standard of 0.12 ppm, but noted that since there were many potentially important new studies published since the last Criteria Document was written, they would complete the next review of the ozone NAAQS as rapidly as possible. The ALA sought judicial review of this decision, but because of EPA's intention to complete the review as rapidly as possible, the ALA granted EPA a voluntary remand of the petition for review. To accomplish the accelerated review, some of the steps listed in Table 1 were conducted to some extent as parallel tasks rather than sequential tasks. In particular, a draft of the Staff

Paper[6] was sent out for CASAC review in February of 1995 even though closure on the Criteria Document did not occur until November of 1995.

As shown in Table 1, CASAC reached closure[7] on the third revision of the Criteria Document in fifteen months. CASAC also reached closure[8] in November 1995 on the Staff Paper after a nine month review process and two Staff Paper revisions. The proposed NAAQSs were announced in the December 13, 1996 *Federal Register*. The last step in the process, EPA's promulgation, is scheduled to be published in the *Federal Register* on or before June 28, 1997. A public comment period for the December 1996 notice will close February 18, 1997.

HISTORY OF THE OZONE STANDARD

The history of the ozone NAAQS is summarized in Table 2. Additional details are contained in the Staff Paper.[6] In the Staff Paper, EPA recommended that the existing 1-hour NAAQS of 0.12 ppm be replaced with an 8-hour average NAAQS within the range of 0.07 ppm to 0.09 ppm with one to five allowable exceedances per year averaged over a three year period. The range of stringency from the most stringent (0.07 ppm with 1 allowable exceedance) to the least stringent (0.09 ppm with 5 allowable exceedances) is substantial. In the December 1996, notice, EPA proposed an 8-hour NAAQS of 0.08 ppm. To be in attainment, the average of the third highest in each year for three years could not exceed 0.08 ppm. At this level, the new NAAQS is significantly more stringent than the present 1-hour NAAQS when the resulting number of nonattainment areas are

considered. With the present NAAQS, 68 Metropolitan Statistical Areas (MSAs) where ozone was monitored through September, 1996 did not meet the standard. This number would jump to 140 with the new 8-hr NAAQS of 0.08 ppm. However, this does not tell the entire story because many of the counties in between MSAs do not now have ozone monitors because they meet the present NAAQS. Some of these counties would become nonattainment with a more stringent NAAQS.

As pointed out in the Criteria Document[5] and the Staff Paper,[6] the 1-hour daily maximum background ozone averages between 0.03 to 0.05 ppm. This is the average 1-hour maximum ozone that could be expected during the summer in the continental U.S. in the absence of sources of anthropogenic precursor emissions in the U.S. In rural areas, which experience broader ozone peaks than urban areas because of the lack of ozone scavenger emissions, the maximum daily 8-hour background ozone concentration would be expected to be only slightly less than the 1-hour maximum background of 0.03 - 0.05 ppm. Consequently, with an 8-hour NAAQSs being considered, background ozone becomes a more important consideration.

OZONE HEALTH EFFECT STUDIES: RESULTS AND IMPLICATIONS

The ozone review relied mainly on four broad types of health effect studies: animal studies, controlled human chamber studies, field studies of ambient exposures, and hospital admission studies. The main use of the animal studies was to gain insight on the mechanisms by which ozone produces biological responses and damage to the respiratory

system. In the controlled human exposure studies, individuals were typically exposed to ozone concentrations slightly above, at, or below the present NAAQS for a number of hours (~ 6 hours is the most common) while engaged in light to heavy exercise. Before, during and after the exposure the individual lung functions (such as FEV_1 which is the maximum volume of air that can be expired in one second) are monitored and any symptoms (cough, shortness of breath, chest pain, etc.) are noted. These studies have produced two important results. First, for one or two hour exposures, decrements in lung function tests and symptoms were noted in individuals not engaged in exercise only at concentrations greater than three times the present NAAQS. However, some exercising individuals experience decreased lung-function test performance and symptoms even at concentrations at or below the present NAAQS when exposed for multiple hours. This is one of the pieces of evidence that suggested a multiple hour (8-hours) NAAQS is a better measure of response than a 1-hour standard.

The field studies consisted of summer camp and adult exercise studies. In the summer camp studies, children, engaged in the normal physical activities that occur at summer camps, participated in lung function testing and the results were compared to the ambient ozone concentrations. In the adult exercise studies, lung function tests were administered to joggers before and after they ran outdoors and the test results were also compared to the ambient ozone concentrations. The results of both types of studies showed a small but statistically significant relationship between decreased performance on the lung function tests with increasing ozone at concentrations at and below the present NAAQS.

These results are consistent with the controlled chamber studies and reinforce the evidence that an 8-hour NAAQS is a better measure of response than a 1-hour NAAQS. Furthermore, since the relationship between the lung function test results and ozone appears to be linear, there may not be a threshold concentration below which biological responses will not occur.

The hospital admission studies examined the relationships between daily ozone concentrations and daily hospital admissions for respiratory causes. These studies have consistently shown an apparent linear relationship in various North American locations between ozone and the admissions, and EPA has assumed that this relationship is cause and effect. The relationship has been shown to remain even when considering only concentrations below the present NAAQS. Thus, there is no evidence of a threshold concentration and this reinforces the conclusion from the field studies.

CASAC'S INTERPRETATION AND RECOMMENDATIONS ON OZONE

It was the consensus of the CASAC Panel that there only be one primary NAAQS, either an 8-hour or a 1-hour NAAQS. Even though an 8-hour time-frame appeared to be a better measure of response, the Panel acknowledged that the same degree of public health protection could be achieved with either an 8-hour or a 1-hour NAAQS at the appropriate level. It was also the consensus of the Panel that the form of the new standard be more robust than the present one. The present standard is based on an extreme value statistic which is significantly dependent on stochastic processes such as extreme meteorological

conditions. The result is that areas which are near attainment will randomly flip in and out of compliance. A more robust, concentration-based form will minimize the "flip-flops," and provide some insulation from the impacts of extreme meteorological events.

The Panel felt that the weight of the health effects evidence indicates that there is no threshold concentration for the onset of biological responses due to exposure to ozone above background concentrations. Based on information now available, it appears that ozone may elicit a continuum of biological responses down to background concentrations. It is critical to understand that a biological response does not necessarily imply an adverse health effect. Nevertheless, this means that the paradigm of selecting a standard at the lowest-observable-effects-level and then providing an "adequate margin of safety" is not possible. It further means that risk assessments must play a central role in identifying an appropriate level.

To conduct the risk assessments, EPA had to identify the populations at risk and the physiological responses of concern, develop a model to estimate the exposure of this population to ozone, and develop a model to estimate the probability of an adverse physiological response to the exposure. EPA selected a small segment of the population, "outdoor children" and "outdoor workers," particularly those with preexisting respiratory disease as the appropriate populations with the highest risks. The Panel concurred with the Agency that the models selected to estimate exposure and risk were appropriate

models. However, because of the myriad of assumptions that are made to estimate population exposure and risk, large uncertainties exist in the model estimates.

The results of two of the risk analyses are presented in the Staff Paper[6] and are reproduced in Tables 3 and 4. It should be noted that the numbers in these Tables differ slightly from the numbers presented in the closure letter[8] which were based on EPA's estimates that were in the August 1995 draft of the Staff Paper. The numbers in Tables 3 and 4 are based on EPA's latest estimates contained in the final June 1996 Staff Paper. The biggest change is in the total number of asthma hospital admissions in Table 4 which is 50% lower than those in the closure letter. The difference is that the closure letter used annual admissions, but the numbers in Table 4 are six-month (ozone season) numbers. By using a six-month basis for the total admissions, the percentage of annual admissions due to ozone exposure is inflated by a factor of two.

The ranges from ten model runs of the risk estimates across nine cities for outdoor children are presented in Table 3. Because of the large number of stochastic variables used in the exposure model, the exposure estimates vary from run to run. However, the ranges presented in Tables 3 and 4 are not reflective of all of the uncertainties associated with the numerous assumptions that were made to develop the estimates.

Based on the results presented in these and other similar tables presented in the Staff Paper and an acknowledgment that all the uncertainties cannot be quantified, the CASAC

Panel concluded that there is no "bright line" which distinguishes any of the proposed standards (either the level or the number of allowable exceedances) as being significantly more protective of public health (this includes the present standard). For example, the differences in the percent of outdoor children (Table 3) responding between the present standard (1H1EX at 0.12 ppm) and the most stringent proposal (8H1EX at 0.07 ppm) are small and their ranges overlap for all health endpoints. In Table 4, the estimates in row 1 suggest considerable differences between the several options. However, when ozone-aggravated asthma admissions are compared to total asthma admissions (rows 5 and 6), the differences between the various options are small.

The results in Table 4 also raise questions concerning the reasonableness of the assumption of a linear relationship between admissions and ozone concentrations with no threshold concentration. If New York City was just meeting the present NAAQS of 0.12 ppm (1H1EX 0.12), Table 4 indicates that ozone would be responsible for 890 admissions per year. However, of that 890, only 210 admissions would be due to ozone concentrations above the summer background concentration which is taken here to be 0.04 ppm. The majority, 680, or 76.4% of the admissions are attributable to ozone exposure when the ozone concentrations were less than or equal to the summertime background.

Nevertheless, the CASAC Panel could see no "bright line" to use as a guide in selecting the numerical value of an NAAQS. However, some of the members did express personal

preferences for the level of the 8-hour NAAQS and they are given below. All the members recommended that there be multiple allowable exceedances. Two other members said that the selection of a level is strictly a policy decision since the risk assessment did not show that any of the NAAQSs considered were more protective of public health. The health effects experts were equally divided as well. Clearly, this is not an endorsement for a 0.08 ppm standard.

# of Members	Preference
1	0.09-0.10
3	0.09
1	0.08-0.09
3	0.08
2	policy call

PERSPECTIVE ON OZONE

Let us examine the individual recommendations of the panel members. Of the fifteen panel members, ten expressed an opinion on the level of the primary NAAQS. Of the five members who did not express an opinion, four were plant biologists who were on the panel for their expertise regarding the secondary NAAQS issue and they were not expected to comment on the primary NAAQS. A fifth panelist, an atmospheric scientist, gave the panel guidance on atmospheric issues but chose not to participate in the health effects discussions.

Of the ten who voiced an opinion, all endorsed an 8-hour standard and all endorsed multiple exceedances. Three members recommended 0.08 ppm which is clearly *more* stringent than the present NAAQS. Three other members recommended 0.09 ppm and one member recommended a range of 0.09 to 0.10 ppm which, with multiple allowable exceedances, ranges from a NAAQS *equal* in stringency to the current NAAQS to a NAAQS *less* stringent to the current NAAQS. Two other members (including the author) said it is a policy decision because the science has not shown any of the alternatives that are being considered as being more protective of public health than any other. The last member supported a NAAQS in the "higher end, the middle to higher end."

THE PM REVIEW PROCESS

The major steps in the PM NAAQS review process are illustrated in Table 5. EPA began drafting the PM Criteria Document[9], in the middle of 1994 Recent Criteria Documents have become mammoth undertakings. The first PM Criteria Document,[10] published in 1969, summarized the relevant science in 220 pages. The final version of the present Criteria Document is a three volume set containing over 2400 pages.

The Staff Paper[11] (Staff Paper) contains the Agency's recommendations for the range and form of the NAAQS along with justifications that are drawn from material contained in the Criteria Document. In the past, the CASAC review of a Criteria Document was completed before the Staff Paper was written so that the Staff Paper would reflect the science contained in the final Criteria Document (an exception to this was the recent

ozone review[1]). The reviews of both the Criteria Document and Staff Paper are iterative processes that usually involve two to three revisions to both of the documents before CASAC reaches closure, and, in the past, the entire process took several years to complete. However, this review was on an accelerated schedule because of a court order resulting from a lawsuit filed by the American Lung Association (ALA).

In February 1994, the ALA filed a suit to compel EPA to complete the PM review by December 1995. The U.S. District Court for the District of Arizona[12] subsequently ordered EPA to complete its review and propose any revision in the *Federal Register* by June 30, 1996 with final promulgation by January 31, 1997. In addition, the Court adopted EPA's projection that the CASAC review of the Criteria Document should be completed by the end of August 1995. Further, the Court ordered EPA to complete a first draft of the Staff Paper by June 1995 and gave CASAC three months to complete its review of the Staff Paper. In addition, the Court stated: "The Court excludes from its revised schedule, the EPA's provisions for interim CASAC review of various Criteria Document and Staff Paper drafts, including participation by CASAC in the development of methodologies for assessment of exposure/risk analyses." As you will see below, however, the review did deviate somewhat from this schedule.

The CASAC Panel members met to discuss the draft of the Criteria Document on August 3-4, 1995, but they could not come to closure. The panel felt that the Criteria Document required extensive revisions and recommended that it be given the opportunity to review

the revised draft.[13] As a result, both EPA and the ALA petitioned the Court and were granted an extension allowing CASAC until January 5, 1996 to complete its review of the Criteria Document and Staff Paper. CASAC met again on December 14-15, 1995 to review the revised draft of the Criteria Document and the first draft of the Staff Paper. Again the Panel concluded that the Criteria Document did "not provide an adequate review of the available scientific data and relevant studies of PM," and could not come to closure on either the Criteria Document or the Staff Paper.[14] Again, both EPA and the ALA petitioned the Court and were granted an extension allowing CASAC until March 15, 1996 to complete its review of the Criteria Document and June 15, 1996 to complete it review of a revised Staff Paper. At a February 29, 1996, the CASAC Panel succumbed to the pressures exerted by the accelerated schedule and reluctantly came to closure on the Criteria Document. I say reluctantly because in the closure letter[15] it was stated that "a number of members have expressed concern that since we are closing on the Criteria Document before we will be able to see the revised version, we have no assurance that our comments will be incorporated." Nevertheless, the Panel closed on the Criteria Document on March 15, 1996.

On May 16 and 17, the Panel met for the final time to review the revised Staff Paper, and came to closure[16]. The details of this review and the CASAC recommendations will be discussed shortly.

HISTORY OF THE PM STANDARDS

The history of the PM standards is summarized in Table 6. In 1971, EPA set annual average and 24-hour NAAQSs for total suspended particulates (TSP). Total suspended particulates consisted of any PM that was collected on the filter of a high volume sampler operating within certain EPA specifications. The upper size captured by the high volume sampler varied with wind speed and wind direction but was generally limited to PM with diameters less than 40 μm (the width of a human hair is about 70 μm). Between 1971 and 1987, it was realized that the most important PM, from a health perspective, were those that deposited in the deep lung (tracheobronchial or pulmonary) region of the of the respiratory system. Maximum PM penetration to the deep lung region occurs during oronasal (combined nose/mouth breathing) or mouth breathing and deposition is restricted to those PM equal to or less than 10 μm in diameter. In nasal breathing, deep lung deposition is limited to particles less than or equal to about 1 μm in diameter. Consequently, in 1987, EPA replaced the TSP NAAQSs with 24-hour and annual PM_{10} NAAQSs where PM_{10} refers to those particles that are equal to or less than 10 μm in diameter. Operationally PM_{10} is defined by the Federal Reference method and sampler. In terms of sampler collection efficiency, the 10 μm cut point represents the size of the particle that is collected with a 50% collection efficiency.

The PM NAAQS is the only NAAQS that is not chemically specific although it is understood that the toxicity of individual particles are not equal. Furthermore, it is understood that the potential for biological responses varies with particle size. As

mentioned above, for normal nasal breathing, the particle sizes of concern are generally 1 μm in diameter or less, while for oronasal breathing, particles equal to or less than 10 μm in diameter are of concern. In addition, the sources of the fine particles ($PM_{1.0}$ or $PM_{2.5}$) are generally different from the sources of the coarser particles (particles greater than or equal to 2.5 μm in diameter. For example particles less than 2.5 μm in diameter are formed primarily by combustion or secondary chemical reactions in the atmosphere whereas particles greater than or equal to 2.5 μm in diameter are formed primarily by mechanical processes (construction, demolition, unpaved roads, wind erosion, etc.) For these reasons, many have felt that fine and coarse particles should be treated as separate pollutants because different control strategies are required to address both size ranges. This logic and the health effects discussed below are what lead EPA staff to recommend the separate $PM_{2.5}$ and PM_{10} NAAQSs listed in Table 6.

The proposed $PM_{2.5}$ NAAQSs is considerably more stringent than the existing PM10 NAAQS. Based on 1993-95 PM_{10} data, there are 41 U.S. counties with monitors not meeting either the annual or 24-hr $PM_{2.5}$ NAAQSs. Under the new $PM_{2.5}$ NAAQSs proposals, it is estimated that the nonattainment counties would be about 170. However, there are two caveats. First, very few places have $PM_{2.5}$ monitors. Consequently $PM_{2.5}$ data are estimated. The $PM_{2.5}$ concentrations were estimated for all counties with PM_{10} samplers by multiplying the relatively abundant PM_{10} data by ratios derived from a much more limited $PM_{2.5}/PM_{10}$ data base. Second, these estimates only include counties with PM_{10} monitors. It is likely, that there will be significant numbers of counties currently

without monitors that will eventually be found to be out of attainment. As a consequence, the actual number of PM nonattainment areas will be substantially higher than EPA's estimates.

PM HEALTH EFFECT STUDIES: RESULTS AND IMPLICATIONS

Although individual PM health effect studies have focused on a variety of endpoints, for obvious reasons the epidemiology studies that focused on human mortality were the primary focus of this review. Consequently, we will only discuss these studies.

There were two types of PM-mortality studies cited by EPA. The first were the short-term, acute mortality studies which compared the daily PM and mortality time series in a dozen or so locations around the US. After filtering out or accounting for the effects of such things as seasonality, day of the week, meteorology, etc. on mortality, the remaining statistical relationship between daily PM and daily mortality was quantified. Although this relationship varied from location to location, the average value was a 4% increase in daily deaths for a 50 $\mu g/m^3$ increase in PM_{10} concentrations.

The second type of epidemiological study is the long-term prospective cohort studies where the health status of certain groups (cohorts) of individuals is followed for a number of years in various locations around the country. In these studies, the annual mortality rate in a given location is related to the annual average PM_{10} or $PM_{2.5}$ concentrations after the mortality rates have been adjusted for smoking and some other potential confounding

variables. Of the three studies reported in the literature, two show a positive relationship between annual mortality and PM and attribute two to three times the number of deaths to PM as the short-term acute effect studies. The third study shows no PM-mortality relationship but EPA dismissed this study for a number of reasons including its lower statistical power (smaller sample size). EPA uses higher mortality estimates from the two studies to conclude that there are premature deaths due to chronic exposure to PM in addition to the deaths due to acute exposures identified in the time-series studies.

In addition, EPA also concluded that the mortality was due to $PM_{2.5}$ rather than the coarse fraction of the PM_{10}. As will be discussed below, the evidence for this conclusion was ambiguous.

CASAC'S INTERPRETATION AND RECOMMENDATIONS ON PM

Table 7 summarizes the Panel members' recommendations concerning the forms and levels of the primary standards. Although some Panel members preferred to have a direct measurement of coarse mode PM ($PM_{10-2.5}$) rather than using PM_{10} as a surrogate for it, there was a consensus that retaining an annual PM_{10} NAAQS at the current level is reasonable at this time. A majority of the members recommended keeping the present 24-hour PM_{10} NAAQS, although those commenting on the form of the standard strongly recommended that the form be changed to one that is more robust than the current standard to provide some insulation from the impacts of extreme meteorological events. Because of the acceptance that $PM_{10-2.5}$ and $PM_{2.5}$ are different pollutants, there was also

a consensus that a new $PM_{2.5}$ NAAQS be established, with nineteen Panel members endorsing the concept of a 24-hour and/or an annual $PM_{2.5}$ NAAQS. The remaining two Panel members did not think any $PM_{2.5}$ NAAQS was justified. However, as indicated in Table 7, there was no consensus on the level, averaging time, or form of a $PM_{2.5}$ NAAQS. At first examination of Table 7, the diversity of opinion is obvious and appears to defy further characterization. However, the opinions can be classified into several broad categories. Four Panel members supported specific ranges or levels within or toward the lower end of EPA staff's recommended ranges. Seven Panel members supported specific ranges or levels near, at, or above the upper end of staff's recommended ranges. Two members did not think a $PM_{2.5}$ NAAQS was warranted at all. The remaining eight other Panel members endorsed the concept of a $PM_{2.5}$ NAAQS, but declined to select a specific range or level. Consequently, only a minority of the Panel members supported a range that includes the present EPA proposals.

I would like to emphasize that CASAC did <u>not</u> endorse EPA's recommended ranges. Pertaining to the 24-hour $PM_{2.5}$ NAAQS, only five members recommended a range that was within EPA's recommended range. Four members recommended greater than or equal to the top of EPA's range. Four members did not recommend a 24-hour NAAQS. The remaining eight members merely endorsed the concept of a 24-hour $PM_{2.5}$ NAAQS, but declined to select a value or range (see footnote 2 in Table 7). Also note from Table 7 that the diversity of opinion was exhibited by the health experts as well as the non-health experts. Clearly, this was not an endorsement of EPA's recommended range.

For the annual standard, four members favored a range or value that was within EPA's recommended range. Three members favored a higher range and eight did not think an annual $PM_{2.5}$ NAAQS was needed. The remaining six members merely endorsed the concept of an annual standard but declined to select a value or range. Again, note from Table 7 that the diversity of opinion was exhibited by the health experts as well as the non-health experts. Clearly, this also was not an endorsement of EPA's recommended range.

However, most of the members who declined to recommend a range had caveats which appear as footnotes in Table 7. The caveats include: "recommends a more robust 24-hr. form," "concerned upper range is too low based on national $PM_{2.5}/PM_{10}$ ratio," "leans towards high end of EPA's proposed range," "yes, but decision not based on epidemiological studies," "low end of EPA's proposed range is inappropriate; desires levels selected to include areas for which there is broad public and technical agreement that they have $PM_{2.5}$ pollution problems," "only if EPA has confidence that reducing $PM_{2.5}$ will indeed reduce the components of particles responsible for their adverse effects," and "concerned lower end of range is too close to background."

The diversity of opinion expressed by the Panel members reflected the many unanswered questions and large uncertainties associated with establishing causality of the association between $PM_{2.5}$ and mortality. Most Panel members were influenced, to varying degrees

by these unanswered questions and uncertainties. The concerns include but are not limited to: 1) the influence of confounding variables, 2) measurement errors, 3) the existence of possible alternative explanations, 4) the lack of an understanding of toxicological mechanisms, 5) the fraction of the daily mortality that is advanced by a few days because of pollution, 6) exposure misclassification, 7) the shape of the dose-response function, and 8) the use of different models in all the studies. Let me expand on these issues.

The first three concerns are related because they pertain to how certain we are that we have identified the correct causative agent. As mentioned earlier, PM_{10} and $PM_{2.5}$ are not single chemical entities. They are composed of four or five major constituents and hundreds of trace constituents. Some have suggested that the causative agent could be some constituent of the PM rather than the total PM or total $PM_{2.5}$ which would require a control strategy targeted at the causative constituent rather than at PM_{10} or $PM_{2.5}$ in general. Also because many of the PM constituents are highly correlated (also with some of the gaseous pollutants as well), the regression methodologies used to determine association, tend to select those variable with the smallest measurement error. For example, $PM_{2.5}$ and PM_{10} are measured much more precisely than the coarse fraction of the PM_{10} ($PM_{10-2.5}$). Consequently, the slightly higher relative risk calculated from the statistical models for $PM_{2.5}$ (versus $PM_{10-2.5}$) is not proof that $PM_{10-2.5}$ is not the causative agent. Finally, several studies including some of the recent reanalyses of original studies have included gaseous criteria pollutants in their model and discovered that in many cases

ozone, sulfur dioxide or carbon monoxide can be as important, and in some cases, more important that PM in describing the mortality. When the data bases are segregated by season, even more confusing results occur as different pollutants are identified for each season as being the apparent causative agent. This has led some to conclude that it is overall air pollution that is causing the excess mortality and that PM is just a surrogate measure. If that is the case, it does not necessarily follow that reducing the concentrations of a surrogate will result in reduced mortality.

The fourth issue of concern has caused several of the Panel members, including one of the chest physicians to state that there is no biologically plausible mechanism that could explain the apparent relationship between acute mortality and PM at concentrations that are a fraction of the present PM_{10} NAAQSs. This has lead some to postulate that the acute mortality is actually a "harvesting" effect. That is, individuals who are terminally ill die somewhat prematurely due to the additional stress caused by PM or overall air pollution. While this may explain some or most of the acute deaths, it can not explain the apparent long-term, chronic deaths attributed to annual PM concentrations in the prospective cohort studies. These prospective cohort studies suggest that the acute mortality only accounts for about a third to a half of the total deaths attributed to PM. However, all or most of this discrepancy vanishes when additional potentially confounding variables are included in the cohort studies and historical or cumulative rather than concurrent air pollution exposures are considered.

The exposure misclassification concern revolves around the validity of the assumption made in all of the acute studies that daily ambient PM data collected from a centrally located air monitoring site is representative of personal exposure to PM. Results from studies which examined this assumption are ambiguous. The shape of the dose-response function is also a concern. Because of measurement errors, the present statistical methodologies are incapable of detecting the existence of a possible threshold concentration below which acute mortality would not occur. Finally, there is some concern because the statistical models used in the various geographical areas are different. At different sites, different combinations of variables, averaging times, methods for accounting for seasonality and meteorology, and lag times have been used to produce the reported PM-mortality relationships.

The lack of consensus on many of these issues can be partially attributed to the accelerated review schedule. The deadlines did not allow adequate time to analyze, integrate, interpret, and debate the available data on this very complex issue. Nor did the court-ordered schedule recognize that achieving the goal of a scientifically defensible NAAQS for PM may require iterative steps to be taken in which new data are acquired to fill obvious and critical voids in our knowledge. The previous PM NAAQS review took eight years to complete.

The Panel was unanimous, however, in its desire to avoid a similar situation when the next PM NAAQS review cycle is under way by a future CASAC Panel. CASAC

strongly recommended that EPA immediately implement a targeted research program to address these unanswered questions and uncertainties. It is also essential that long-term $PM_{2.5}$ measurements are obtained. CASAC volunteered to assist EPA in the development of a comprehensive research plan that will address the questions which need answers before the next PM review cycle is completed.

PERSPECTIVE

Since PM_{10} measurements became widespread in 1988, significant and continuous declines in ambient PM_{10} concentrations have been observed throughout the U.S. Nationwide PM_{10} concentrations have declined 22% from 1988 to 1995.[17] The reason for this decline is because of the implementation of existing control programs required by the 1990 Clean Air Act Amendments that target $PM_{2.5}$ precursors (VOCs, NO_x, and SO_2), diesel PM emissions and other primary emission sources. This trend will continue for the foreseeable future as additional measures required by the Amendments are phased in. Consequently, there is time to conduct the research recommended by CASAC which targets the concerns discussed above. Then appropriate $PM_{2.5}$ NAAQSs could be established.

REFERENCES

1. Yosie, T.F. "The EPA Science Advisory Board," *Environ. Sci. Technol.* **1993**, 27, 1476-1481.
2. U.S. EPA Science Advisory Board. "Science Advisory Board FY1995 Annual Staff Report," EPA-SAB-96-001, U.S. EPA, Washington, DC, April 1996.
3. Lippmann, M. "Role of science advisory groups in establishing standards for ambient air pollutants," *Aerosol Sci. Technol.* **1987**, 6, 93-114.

4. Public Health Service. "Air Quality Criteria for Photochemical Oxidants," U.S. Dept. Health, Education, and Welfare, Washington, DC, March 1970.
5. U.S. EPA Office of Research and Development. "Air Quality Criteria for Ozone and Related Photochemical Oxidants," EPA/600/AP-93/004a-c, U.S. EPA, Washington, DC, February 1995.
6. U.S. EPA Office of Air Quality Planning and Standards. "Review of National Ambient Air Quality Standards for Ozone Assessment of Scientific and Technical Information OAQPS Staff Paper," U.S. EPA, Durham, NC, June 1996.
7. Wolff, G.T. "CASAC Closure on the Air Quality Criteria for Ozone and Related Photochemical Oxidants," EPA-SAB-CASAC-LTR-96-001, U.S. EPA, Washington, DC, November 1995.
8. Wolff, G.T. "CASAC Closure on the Primary Portion of the Staff Paper for Ozone," EPA-SAB-CASAC-LTR-96-002, U.S. EPA, Washington, DC, November 1995.
9. U.S. EPA Office of Research and Development. "Air Quality Criteria for Particulate Matter," EPA/600/P-95/001aF-cF, U.S. EPA, Washington, DC, April 1996.
10. Public Health Service. "Air Quality Criteria for Particulate Matter," U.S. Dept. Health, Education, and Welfare, Washington, DC, January 1969.
11. U.S. EPA Office of Air Quality Planning and Standards. "Review of National Ambient Air Quality Standards for Particulate Matter, Policy Assessment of Scientific and Technical Information, OAQPS Staff Paper," EPA-452\R-96-013, U.S. EPA, Research Triangle Park, NC, July 1996.
12. American Lung Ass'n v. Browner, 884 F. Supp. 345 (D. Ariz. 1994).
13. Wolff, G.T. "Clean Air Scientific Advisory Committee (CASAC) Comments on the April 1995 draft Air Quality Criteria for Particulate Matter," EPA-SAB-CASAC-LTR-95-005, U.S. EPA, Washington, DC, August 31, 1995.
14. Wolff, G.T. "Clean Air Scientific Advisory Committee (CASAC) Comments on the November 1995 Drafts of the Air Quality Criteria for Particulate Matter and the Review of National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information (OAQPS Staff Paper)," EPA-SAB-CASAC-LTR-96-003, U.S. EPA, Washington, DC, January 5, 1996.
15. Wolff, G.T. "Closure by the Clean Air Scientific Advisory Committee (CASAC) on the Draft Air Quality Criteria for Particulate Matter," EPA-SAB-CASAC-LTR-96-005, U.S. EPA, Washington, DC, March 15, 1996.
16. Wolff, G.T. "Closure by the Clean Air Scientific Advisory Committee (CASAC) on the Staff Paper for Particulate Matter," EPA-SAB-CASAC-LTR-96-008, U.S. EPA, Washington, DC, June 13, 1996.
17. U.S. EPA Office of Air Quality Planning and Standards. "Air Quality Trends," EPA-454/F-95-003, U.S. EPA, Research Triangle Park, NC, September, 1995.

Table 1: Steps in the NAAQS review process. Completion dates are for the ozone review

	Steps in a NAAQS Review	Completion Date
1	CASAC review of the Criteria Document	June 1994 to September 1995
2	CASAC closure on Criteria Document	November 28, 1995
3	CASAC review of Staff Paper	February 1995 to September, 1995
4	CASAC closure on Staff Paper	November 30, 1995
5	EPA publishes proposed NAAQS in Federal Register	December 13, 1996
6	EPA promulgates final NAAQS in Federal Register	July 19, 1997

Table 2: Historical Overview of Ozone NAAQS

Year	Primary NAAQS	Secondary NAAQS
1971	1-hr. @ 0.08 ppm	same as primary
1977	1-hr. @ 0.12 ppm 3 ex in 3 years*	same as primary
1993	reaffirmed 1977 NAAQS	reaffirmed 1977 NAAQS
1996 (recommended in Staff Paper)	8-hr. @ 0.07-0.09 ppm 1 to 5 ex per year averaged over 3 years**	3 month SUM06 25-36 ppm-hours#
December 13, 1996 proposal	8-hr @ 0.08 ave of 3rd highest in 3 yrs	either equal to primary or 3-mo SUM06 @ 25 ppm-hours

* 3 exceedances allowed within 3 consecutive years
** 1 to 5 exceedances allowed within a year averaged over a 3-year period
# see Criteria Document[5] for an explanation.

Table 3: Range of Median Percent of Outdoor Children Responding Across Nine U.S. Urban Areas Upon Attaining Alternative Air Quality Standards.[a]

Health Endpoints	Range of Median Risk Estimates Associated With Just Attaining Alternative Standards (percent of outdoor children responding)							
	Alternative 1-Hour NAAQS		Alternative 8-Hour Daily Maximum Standards					
			1 Expected Exceedance Standards				5 Expected Exceedance Standard	
	1H1EX[b] 0.12 ppm	1H1EX 0.10 ppm	8H1EX 0.10 ppm	8H1EX 0.09 ppm	8H1EX 0.08 ppm	8H1EX 0.07 ppm	8H5EX 0.09 ppm	8H5EX 0.08 ppm
FEV_1 decrement ≥ 15%	5-14	3-9	7-16	5-12	3-8	2-5	5-14	3-10
FEV_1 decrement ≥ 20%	1-6	0-4	2-7	2-5	1-3	0-1	2-6	1-4
Moderate or Severe Pain on Deep Inspiration	0	0	0-1	0	0	0	-	-
Moderate or Severe Cough	0-1	0	0-1	0-1	0	0	-	-

[a] Estimates for alternative NAAQSs with 1 exceedance from Table V-18 in final Staff Paper[6]; estimates for NAAQSs with 5 exceedances from Table VI-1 in August 1995 draft Staff Paper.
[b] 1H means 1-hour standard; 1EX means 1 allowable exceedance per year.

Table 4: Estimated Hospital Admissions for Asthmatics in the New York City Area

	1H1EX 0.12	1H1EX 0.10	8H1EX 0.10	8H1EX 0.09	8H1EX 0.08	8H1EX 0.07	8H5EX 0.09	8H5EX 0.08	AS IS
Excess Admissions[a]	207 70-344	130	240	180	115 39-191	60	180	120 41-199	388 132-644
% Δ from present std	0%	-37%	+16%	-13%	-44%	-71%	-13%	-42%	+87%
Excess + background[b]	909 308-1509	810	920	860	804 273-1336	740	860	797 270-1320	1065 361-1770
% Δ from present standard	0%	-11%	+1%	-5%	-12%	-19%	-5%	-12%	+17%
All Asthma Admissions	14,819	14,742	14,852	14,792	14,727	14,672	14,792	14,732	15,000
% Δ from present standard	0%	-0.5%	+0.2%	-0.2%	-0.6%	-1.0%	-0.2%	-0.6%	+1.2%

a - excess asthma admissions attributed to ozone levels exceeding a background concentration of 0.04 ppm; the values with ranges (90% confidence intervals) are from Table V-20 in the Staff Paper[6]; single value estimates are from Figure V-17 in the Staff Paper[6]
b - asthma admissions included in (a) plus those due to background ozone concentrations; admissions due to background = 1065 - 388 = 677

Table 5: Steps in the NAAQS review process. Completion dates are for the PM review

	Steps in a NAAQS Review	Completion Date
1	CASAC review of the Criteria Document	June 1995 to March 1996
2	CASAC closure on Criteria Document	March 15, 1996
3	CASAC review of Staff Paper	November 1995 to June 1996
4	CASAC closure on Staff Paper	June 13, 1996
5	EPA publishes proposed NAAQS in Federal Register	December 13, 1996
6	EPA promulgates final NAAQS in Federal Register	July 19, 1997

Table 6: Historical Overview of PM NAAQSs

YEAR	MEASURE	24-HR ($\mu g/m^3$)	ANNUAL ($\mu g/m^3$)
1971	total suspended particulates (TSP)	260	75
1987	PM_{10} (particulates with diameters $\leq 10\ \mu m$)	150	50
1996	*EPA Staff recommendation*:		
	$PM_{2.5}$	18-65	12.5-20
	PM_{10}	150	40-50
12/96	*Federal Register* Notice		
	$PM_{2.5}$	50	15
	PM_{10}	150	50

Table 7: Summary of CASAC Panel Members Recommendations
(all units $\mu g/m^3$)

	$PM_{2.5}$	$PM_{2.5}$	PM_{10}	PM_{10}
	24-hr	**Annual**	**24-hr**	**Annual**
EPA Staff Recommendation	18 -65	12.5 - 20	150[13]	40 - 50
December, 1996 Proposal	50	15	150	50
Discipline of Panel Member				
Epidemiologist[1]	20 - 50	no	no	40 - 50
Epidemiologist	20 - 30	15 - 20	no	50
Health Effects Expert	20 - 50[3]	15 - 20	no	40 - 50
Atmospheric Scientist	20 - 50[3]	20 - 30	no	40 -50[4]
Biologist	yes[2]	yes[2]	150	50
Chest Physician	yes[2]	yes[2]	150	50
Atmospheric Scientist	yes[2,3,12]	yes[2,5]	150[3,13]	50
Atmospheric Scientist	yes[2,9]	yes[2,9]	yes[4]	yes[4]
Atmospheric Scientist	yes[3,10]	yes[10]	no[3,4]	yes[4]
Epidemiologist[1]	yes[2,11]	no	150	yes[2]
Atmospheric Scientist	yes[3,5]	no	150[13]	50
Atmospheric Scientist	yes[2,5,6,12]	yes[2,5,6]	no	yes[4]
Toxicologist	50	20	150	50
Atmospheric Scientist	no	20	150	50
Statistics Expert	no	25-30[7]	no	yes[2]
Chest Physician	≥65	no	150	50
Epidemiologist	75[7]	25-30[7]	150	50
Biologist	≥ 75	no	150	40 - 50
Atmospheric Scientist*	≥75[3,7]	no	150[3]	50
Toxicologist	no[8]	no[8]	150	50
Toxicologist	no	no	150	50

[1] not present at meeting; recommendations based on written comments
[2] declined to select a value or range
[3] recommends a more robust 24-hr. form
[4] perfers a $PM_{10-2.5}$ standard rather than a PM_{10} standard
[5] concerned upper range is too low based on national $PM_{2.5}/PM_{10}$ ratio
[6] leans towards high end of EPA's proposed range
[7] desires equivalent stringency as present PM_{10} standards
[8] if EPA decides a $PM_{2.5}$ NAAQS is required, the 24-hr. and annual standards should be 75 and 25 $\mu g/m^3$, respectively with a robust form
[9] yes, but decision not based on epidemiological studies
[10] low end of EPA's proposed range is inappropriate; desires levels selected to include areas for which there is broad public and technical agreement that they have $PM_{2.5}$ pollution problems
[11] only if EPA has confidence that reducing $PM_{2.5}$ will indeed reduce the components of particles responsible for their adverse effects
[12] concerned lower end of range is too close to background
[13] the annual standard may be sufficient; 24-hour level recommended if 24-hour NAAQS is retained
* the chair's recommendation

Mr. McINTOSH. In contrast to the experts' warning that the proposed rules provide no benefit, there is strong reason to conclude that they will be harmful to effects to clean the air and the efforts to protect Americans' health. The end result will be the loss of hundreds of thousands of jobs and the degradation of human health—the exact opposite of EPA's stated objective.

What are these alternatives to the illegal rulemaking? There are clearly better investments that can be made to promote public health. Eight billion dollars could save 3 to 4 times as many women from breast cancer by paying for mammograms. And indeed, what we're seeing is that communities who are making progress today under the current standards will not know what they need to do to comply with the new standards. I'm deeply concerned that the proposed standards would work against the considerable progress that has been made to date, because of either the uncertainty that's created or because of years of litigation that may result in an invalidation of these procedurally flawed rules.

Frankly, hundreds of new communities will be thrown out of compliance with the Clean Air Act. According to EPA, there are 600 additional counties that will be in non-attainment, and many others that may be because of the lack of monitoring data. That would more than triple the number of areas where State and local officials will have to impose very onerous new control measures, even though there is no proof that the new standards can ever be met.

The greatest burdens will fall on small businesses and communities that may be forced to require such measures as mandated car pooling and centralized emission inspections for family cars. And the rules may force new restrictions on the use of boats, lawn mowers, fireplaces, and even outdoor barbecues. New road construction projects may be delayed in these counties or halted altogether. Farming practices may be restricted. And urban sprawl would indeed increase.

Well, let's look at some of these alternatives with what we could do with money that would be spent on this rulemaking. As I mentioned earlier, $8 billion could save 3 to 4 times as many women from breast cancer by paying for mammograms. Or we could pay for asthma research and the asthma medicine for all of the Nation's asthma sufferers, not just a fraction of one kind of asthma patients that EPA says may be helped by these ineffective rules.

Our goal is to ensure that the process is not only lawful, but that it provides the best and most effective protection for public health and the environment. Let me explain what I mean by using the following hypothetical. Suppose your child were to become seriously ill, wouldn't you, as a parent, want the best possible understanding of the cause before your child undergoes surgery or treatment? You would want your doctor to perform all of the necessary tests for a sound diagnosis to determine the least intrusive procedure for curing your child.

Before agreeing to surgery or radical treatment, you'd want to explore all other medical options and consider the risks and potential side effects of each one of them. We all know that the careless prescription of medicines without screening for allergies and drug interactions can indeed harm or even kill a patient instead of cur-

ing them. The care of our nation's public health requires nothing less then the same type of care needed to take care of our children.

In sum, America cannot breathe easily until EPA has fully complied with the law. Only then can EPA determine how our scarce resources can be put to the greatest social good. EPA's proposed standards for particulate matter and ozone represent an irresponsible and, frankly, potentially illegal rush to judgment, which may undermine our Nation's efforts to clean the air. As Mayor Daley has stated, standards do not improve public health, clean air does.

Thank you very much. Mr. Sanders, do you have an opening statement?

Mr. SANDERS. I do. And thank you very much, Mr. Chairman. Let me just begin by thanking you for holding this important hearing and also for making accommodations for Dr. Munzer to be on the first panel. As you know, this is, in fact, a controversial hearing, although not a partisan one. And I end up disagreeing with many of the assertions that you just made. But we'll discuss those later.

I, for one, am, in fact, very pleased that the EPA has proposed stricter standards for ozone and fine particulates. Too many Americans, many of them young children in Vermont and, more importantly, in urban areas throughout this country, are suffering from asthma and other respiratory conditions caused or exacerbated by these pollutants. In fact, studies have shown that ozone levels typically below the current standard were linked to 29 percent of all respiratory hospital admissions.

Ozone at levels below the current standard are causing asthma attacks and exacerbating allergies. Ozone at levels below the current standard are linked to measurable declines in lung function in children. Ozone at levels below the current standards cause inflammation of the upper airways of normal, healthy children. Healthy, exercising adults exposed to ozone at or below the current Federal standard experience 5 to 15 percent decrease in lung function. And sensitive individuals suffered a debilitating 40 to 50 percent loss. Non-smoking men and women living in areas with relatively high levels of ozone and other air pollutants had approximately one-half to three-quarters the lung function damage of a one-pack-a-day smoker.

That is serious business. Similarly, studies of particulate matter show particulate air pollution is linked to hospital admissions for pneumonia, chronic obstructive pulmonary disease, heart attacks, angina and heart failure. In a study of 1,850 school children, when particulate pollution was increased, all children suffered symptoms, even when the pollution was substantially below the current national danger standard.

The average life span shortening resulting from exposure to particulates is in the order of 2 years. This is strong evidence that the time to act is now. Environmental degradation is becoming increasingly linked with health problems, like asthma, which are on the rise. When we know there is a link with a particular pollutant, we should use this knowledge to establish sound public policy. We have the chance here to prevent an estimated 15,000 deaths.

We can give our children the chance to play outside on sunny days with fewer asthma attacks. And I think we should seize this

opportunity. We have the obligation to protect the interests of the health of the American people, and especially our children.

I have read that some critics feel that we need to do more research before setting these standards. More research is always a good idea. But it looks like we have enough at this time to set the proposed standards.

The Clean Air Scientific Advisory Committee, otherwise known as CASAC, an independent review panel representing different parts of the scientific community, has reviewed thousands of studies over a 3-year period and overwhelmingly supports the standards proposed by the EPA. And I have no reason to believe anyone is concerned that the studies relied on were faulty. Let me quote from the closure letter from that panel:

"It was the consensus of the panel members that the criteria document provides an adequate review of the available scientific data and relevant studies of ozone. The document is quite comprehensive and will provide an adequate scientific basis for regulatory decisions on ozone based on available information." Further quote, "It was the consensus of the panel that the ranges of concentrations and allowable exceedances proposed by the agency were appropriate."

Similarly, on particulate matter, the CASAC panel wrote, "With the incorporation of our suggested changes, the revised criteria document will be very comprehensive and will provide an adequate scientific basis for regulatory decisions on particulate matter." And I quote again, "There were also concerns that a new PM2.5 NAAQS be established, with 19 panel members endorsing the concept of a 24-hour and/or an annual PM2.5 NAAQS."

Now, others may have different opinions, especially special interests, who may have to clean up their act. However, under the Clean Air Act, the EPA must set the standard based on the best scientific evidence available. And that is what it has done. And Mr. Chairman, I think that is an appropriate action.

I represent the State of Vermont. So let me take a moment to address some regional issues. The problem with air pollution is that it just doesn't stay in one place. It is not just a California issue or a Vermont issue. And in the case of ozone and fine particulates, Vermont, the Northeast, and our neighbor to the north, Canada, are breathing the second-hand smoke of the coal-burning power plants in the Midwest. In fact, there is one plant in Ohio that emits more NOx, a precursor to ozone, than all of the utility plants in New Jersey and five times the annual emission of the District of Columbia. And those NOx ride on westerly winds to the Northeast. And we in the Northeast breathe that pollution and have trouble attaining the current standards.

It is about time this issue was addressed. And these standards will improve air quality in both places—in the Midwest and the Northeast. Furthermore, as pointed out by the director of the air pollution control division of Vermont's Agency of Natural Resources, "These upwind reductions from large, fully controlled coal-fired power plants would be very cost-efficient on a per-ton basis and would reduce the burden of more costly per ton controls on Vermont sources."

Mr. Chairman, thank you again for holding this important hearing and thank you for working with the minority to ensure that witnesses with differing points of view could testify and present a full and fair picture of the issues. I look forward to working together with you on future hearings on the clean air standards and other issues.

Mr. CONDIT. Mr. Chairman?

Mr. MCINTOSH. Yes.

Mr. CONDIT. Mr. Chairman, can you yield some time to me so I can make a quick statement?

Mr. MCINTOSH. I would be happy to. Mr. Condit, I also didn't realize that our vice chairman, Mr. Sununu, had one. Could I hear from him, and then we'll go back to you? Mr. Waxman, do you have an opening statement as well?

Mr. CONDIT. Well, I think we'll have time for both of those.

Mr. MCINTOSH. Mr. Sununu.

Mr. SUNUNU. Thank you, Mr. Chairman. And Mr. Condit, I will try to be brief. I'd like to thank all of you who are taking the time today to offer your testimony and share your thoughts with this subcommittee. In particular, I want to welcome my friend, Senator Rick Russman, who will appear in our next panel. And he continues to do an excellent job representing the 19th Senate District in my home State of New Hampshire.

I'm proud to note that New Hampshire possesses a strong history of support for high standards in environmental protection and resource management. Through the implementation of practices based on sound science and common sense, and through inclusive planning such as that which we used to develop our 10-year forest plan, New Hampshire has actively protected the value of our natural heritage and maintained an extremely high quality of life. On a national scale, the United States has been successful, as well, reaping the benefits of the Clean Air Act as States, cities and towns continue to improve the quality of the air we breathe.

Still, however, concerns remain. In the Northeast, for example, as was mentioned by Congressman Sanders, we continue to deal with the issue of pollution transport. To that end, I'm hopeful that the work of the regional ozone transport assessment group will help us move toward a long-term solution to this serious problem. But the issue before us today is not whether we share the goal of protecting public health.

Clearly, we all do share that goal. Our objective is to ensure that the process we use to establish such regulatory guidelines utilize the best available science to determine the most appropriate standards and implement them at the lowest cost to society. And equally important, we must ensure that this process reflects the true intent of laws such as the Clean Air Act signed by President Bush and the Small Business Regulatory Enforcement Fairness Act passed during this last session of Congress.

And the specific case of the EPA's proposed particulate standards—I would hope that these hearings address the question of whether adequate scientific evidence exists to support the restrictions being proposed. Given that the Clean Air Scientific Advisory Committee in its final report noted, "There was no consensus on the level, average time, or form of a particulate standard," it's clear

that some significant questions do exist. Moreover, the President, recognizing the lack of hard and firm data, has himself called for greater spending on research and monitoring activity.

Clearly, our focus should be on the need for accurate monitoring in order to fairly assess the potential costs and benefits of any new rule. With regard to the ozone standards, I hope we can begin to get a clear picture of the actual anticipated benefits in real terms rather than just in broad, sweeping statements. These hearings are an important step toward understanding whether we're properly addressing the very concerns raised throughout the regulatory review process.

It's encouraging that Administrator Browner has reacted appropriately to concerns that have been raised by extending and delaying the review and comment period. I look forward to the testimony today and hope that it will shed some light on the process and science that EPA has used to develop these standards. Our responsibility is to look at them in a fair and critical light to ensure that they'll provide us with real and measurable benefits to all of our citizens without imposing an undue or unreasonable burden.

Thank you, Mr. Chairman.

[The prepared statement of Hon. John E. Sununu follows:]

Testimony of Congressman John E. Sununu
Subcommittee on National Economic Growth, Natural Resources,
and Regulatory Affairs
April 16, 1997

Thank you Mr. Chairman. I would also like to thank those who are taking the time today to offer their testimony and share their thoughts with this subcommittee. In particular, I want to welcome my friend, Senator Rick Russman, who continues to do an excellent job representing the 19th Senate district in the State of New Hampshire.

I am proud to note that New Hampshire possesses a strong history of support for high standards of environmental protection and resource management. Through the implementation of practices based on sound science and common sense, and through inclusive planning methods such as those used to develop our state's 10 year forest plan, New Hampshire has actively protected the value of our natural heritage, and maintained a high quality of life.

On a national scale, the United States has been successful reaping the benefits of the Clean Air Act as states, cities and towns improve the quality of the air we breathe. Still, however, concerns remain. In the Northeast, for example, we continue to deal with the issue of pollution transport. To that end, I am hopeful that the work of the regional Ozone Transport Assessment Group will help us move toward a long term solution to this problem.

But the issue before us today, is not whether or not we share the goal of protecting public health. Clearly, we do.

Our objective is to ensure that the process used to establish such guidelines utilizes the best available science to determine that the most appropriate standards are implemented at the lowest cost to society.

And equally important, we must ensure that this process reflects the true intent of laws such as the Clean Air Act signed by President Bush, and

the Small Business Regulatory Enforcement Fairness Act passed during the last Congress.

In the specific case of the EPA's proposed particulate standards, I would hope that these hearings address the question of whether adequate scientific evidence exists to support the restrictions being proposed. Given that the Clean Air Scientific Advisory Committee in its first report noted "there was no consensus on the level, averaging time, or form of a (particulate standard)" it is clear that significant questions still exist. Moreover, the President, recognizing the lack of hard and firm data has called for greater spending on such research. Clearly our focus should be on the need for accurate monitoring activity to fairly assess the potential costs and benefits of new rules. With regard to the ozone standards I hope we begin to get a clear picture of the actual anticipated benefits.

These hearings are an important step toward understanding whether we are properly addressing the very concerns raised throughout this review

process. It is encouraging that Administrator Browner has reacted appropriately to these concerns by extending the review and comment period.

I look forward to the testimony today to shed some light on the process and science the EPA has used to develop these standards. Our responsibility is to look at them in a fair and critical light to ensure that they will result in a real and measurable benefit to our citizens without imposing and unreasonable burden. Thank you Mr. Chairman.

Mr. MCINTOSH. Thank you, Mr. Sununu. Mr. Condit, by the way, let me thank you for helping to arrange for one of our witnesses to come. And Mr. Sanders, thank you and your staff for the cooperation they've given us in preparing for the hearing.

Mr. CONDIT. Thank you, Mr. Chairman. What I would like to do is submit a statement for the record. And the reason I'm taking some time here is I do want to make an introduction of the witness that has come from my district and is a constituent of mine. Because we've got a couple other hearings going on, I'm going to have to step out just for a few minutes. But I'd like to take the opportunity to introduce Mike Wade, from my district. Mike is an almond farmer from Atwater, CA, where he farms about 70 acres of almonds. He is also the executive director of the Merced County Farm Bureau. And in that capacity, Mike has worked for many years with other interests in the San Joaquin Valley on research regarding PM10 standards.

Mike has become an expert on that issue. Today I look forward to his testimony and I appreciate very much the fact that he's come all the way from California to be with us. And I appreciate you allowing him to be here today, Mr. Chairman.

So, with that, I have a statement to submit. I'm going to excuse myself for a few minutes and I'll be back.

Thank you, Mr. Chairman.

[The prepared statement of Hon. Gary A. Condit follows:]

STATEMENT BY
CONGRESSMAN GARY A. CONDIT

SUBCOMMITTE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES, & REGULATORY AFFAIRS

EPA'S PARTICULAR MATTER & OZONE RULEMAKING:
Is EPA Above the Law?

April 16, 1997

Thank you for holding this important hearing, Mr. Chairman.

I am a strong advocate of doing everything we can to obtain clean air standards in order to enhance public health, environmental quality and economic growth. These standards, however, must be based upon sound science and concrete cost-benefit analysis if we are to justify their implementation costs. It appears that this has not been the case when the Administration developed the new NAAQS standards for ozone and PM which could result in far-reaching impact on both the public and private sector.

First, as an author of the Unfunded Mandates Reform Act, I am very concerned about the impact these new standards will have upon already overburdened state and local governments. During today's hearing we will hear from a panel of state and local officials to the extent of this impact could have. Second, according the EPA's own figures, it will cost private industry $6 billion dollars to comply with the ozone standard and $2.5 billion to comply with the PM standard for public health benefits that the EPA's own scientific review panel are uncertain about. Third, EPA has also decided not to considered cost-benefit analysis until the implementation phase. I am concerned that without consideration of the cost of implementation, and lack of current technologies available to attain the proposed standard, the new standards may be determined to be unattainable.

When you put these uncertainties together, there are many questions that Congress, the general public, the business community, and state and local government must ask to fully understand and realize what the Administration is doing.

Finally, let me take this time to introduce a constituent of mine on the first panel, Mike Wade. Mike is an farmer from Atwater, California where he farms about 70 acres of almonds. In his other life, Mike is the Executive Director of the Merced County Farm Bureau. Under this capacity, Mike has worked for a number of years with other interest in the San Joaquin Valley on research regarding PM10 standards. I look forward to Mike's testimony as with the other individuals who will testify before us today.

Thank you again for the time Mr. Chairman.

Mr. MCINTOSH. Thank you, Mr. Condit. We'll put the full statement in the record. Mr. Waxman, did you——

Mr. WAXMAN. Mr. Chairman, I want to thank you for holding this hearing. And I also want to thank you for including some of our suggested witnesses in the hearing so that we could have a balanced presentation on all the different perspectives. The Clean Air Act has been a great success. It is responsible for remarkable progress in cleaning up the air in the last 25 years. Major air pollutants have decreased nationally by 30 percent. But at the same time, our domestic product nearly doubled and our population increased by 28 percent.

Incredibly, the Clean Air Act has achieved all this at a cost far lower than anyone had predicted. In 1990, for example, industry predicted the law would cost about $91 billion a year. In fact, that actual cost of the act is only 25 percent of industry's projections.

Despite the repeated errors in these type of economic projections, there are some who would like the Clean Air Act to set standards based on costs. And I believe this hearing will highlight the dangers of such a scheme. The EPA has prepared a regulatory impact statement, or what's called an RIA, which analyses the costs and benefits of revising the ozone and particulate matter proposals. This analysis is the state-of-the-art. It was developed over a period of 2 years, and it's one of the best RIAs ever produced by any agency. Despite the efforts put into this RIA, it has shortcomings. There are some who would argue that the costs are underestimated. Others would say that they're overestimated. On the other hand, the EPA admits that many benefits are simply not quantified. Estimating benefits and costs is an imprecise and easily manipulated task. If we were to set air quality standards based on these cost projections, standards would be no better than arbitrary, and we could no longer expect them to protect the public's health. Arguing over costs and benefits would throw our clean air efforts into gridlock.

Fortunately, we don't have to face that problem. We have a rational approach in this law, which has made the Clean Air Act so effective. Air quality standards are health-based. They are set at a level which protects the public health. However, recent studies inform us that the existing standards need to be modernized, because they are not adequately protecting the public health. Many studies indicate that tens of thousands of people are dying and hundreds of thousands more are suffering from illnesses caused by commonly found levels of air pollution that are currently mis- labeled as safe.

We need the EPA to set a health-based standard that is going to protect the public health. And then we can talk about the costs and the timeframe to achieve those standards. That's a very different approach and one that's been very successful, than one that has been talked about where we set the standards based on these cost-benefit projections, which are so inadequate and which would lead to standards that would not accomplish the goal of adequately protecting the public health.

I thank you for your cooperation in scheduling the witnesses and this hearing. And I look forward to the testimony of the witnesses today.

[The prepared statement of Hon. Henry A. Waxman follows:]

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HENRY A. WAXMAN
29TH DISTRICT, CALIFORNIA

Statement of

HENRY A. WAXMAN

April 16, 1997

Mr. Chairman, thank you for holding this hearing and focusing attention on the Clean Air Act. We have many witnesses today, so I will keep my opening statement brief.

The Clean Air Act is responsible for remarkable progress in cleaning up the air in the last 25 years. Major air pollutants have decreased nationally by 30%, but in the same time period our gross domestic product nearly doubled and our population increased by 28%.

Incredibly, the Clean Air Act has achieved all this at a cost far lower than anyone had predicted. In 1990, for example, industry predicted the law would cost about $91 billion a year. In fact, the actual cost of the Act is only 25% of industry's projections.

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Despite the efforts put into this RIA, it has shortcomings. There are some who would argue that the costs are underestimated. Others would say they are overestimated. On the other hand, the EPA admits that many benefits are simply not quantified.

Estimating benefits and costs is an imprecise and easily manipulated task. If we were to set air quality standards based on these cost-projections, standards would be no better than arbitrary and we could no longer expect them to protect the public's health. Arguing over costs and benefits would throw our clean air efforts into gridlock.

Fortunately, we don't have to face that problem. We have a rational approach which has made the Clean Air Act one of the most effective government initiatives of this century. Air quality standards are health-based. They are set at a level which protects the public's health.

However, recent studies inform us that the existing standards need to be modernized because they are not protecting the public's health. Many studies indicate that tens of thousands of people are dying and hundreds of thousands more are suffering from illnesses caused by commonly found levels of air pollution that are currently mislabelled as "safe."

Mr. Chairman, I thank you for your cooperation with witnesses on this hearing and I look forward to hearing the testimony of our witnesses today.

Mr. MCINTOSH. Thank you very much, Mr. Waxman. If any other members of the committee would like to submit a statement for the record, I'd be glad to take it. Let me now ask each of the members of the first panel to please rise and raise your right hand.

[Witnesses sworn.]

Mr. MCINTOSH. Thank you. Let the record reflect that each of the witnesses answered in the affirmative. By the way, just so you don't think that this is a special proceeding, this is something that we've had as our full committee policy in the 3 years that I've served in Congress, that we ask each of our witnesses to be sworn in.

Our first witness today is Mrs. Faith Kline, who is a schoolteacher in the fourth grade. Mrs. Kline, if you could share with us your testimony.

STATEMENT OF FAITH KLINE, SCHOOL TEACHER, FOURTH GRADE, PHILADELPHIA, PA

Ms. KLINE. Good morning. My name is Faith Kline. I teach fourth graders in the school district of Philadelphia. Many of my students, and I, have severe asthma triggered by tobacco smoke, extremes in weather changes, pollen and stress.

All of my 33 students are African-American. My school's poverty rate is 86 percent. The 80-year-old building should be repainted, but there's no money for that. When it rains, one wall of my room floods and old paint and plaster fall from the ceilings and the walls. Sometimes the cement yard where I pick my children up in the morning hasn't been cleaned. It's littered with old needles, empty crack vials, broken glass, and used condoms.

We don't have any playground equipment. When they stay after school to read, my children leave by 3:45 p.m., because at 4 o'clock the drug dealers are on the corner.

Two weeks ago, an 11-year-old girl was shot six blocks from my school. The aunt of one of my students was raped last week on her way home from work. Last summer I called a former student, her grandmom told me Neenee was sleeping by the fan because she couldn't get enough air. I asked about the air conditioner and she replied, "I can't afford an air conditioner. And even if I could, I couldn't afford the electric bill."

You talk about stress? If your asthma is triggered by stress, and this is your life, no wonder you can't breathe. The American Lung Association cites studies and reports that at camp, it's harder for kids to breathe and they use more medication depending on pollution levels. My daughter has asthma. When she's at camp, Kristin runs around more. She rides horses, swims in a chlorinated pool, and sleeps in a cabin on a 20-year-old mattress. The cabin is in the woods. She shares it with 11 other girls. And at camp, Kristin uses more asthma medication than she does at home.

But Kristin has attended summer camp for 7 years. She keeps going back. I keep spending a lot of money to send her there. Obviously, the benefits of summer camp outweigh the asthma problems. And clearly these studies have not controlled for intervening variables like physical activity, animal dander, molds and pollens.

EPA has indicated tightening the standard would produce an increased public health protection. Their own literature says, "Re-

peated exposure to ozone pollution for several months may cause permanent lung damage." ALA's literature states, "Many Americans appear to be at risk from ozone pollution. And in lab animals, exposures to ozone may promote the development of some cancers."

Equally true, then, are these statements. Ozone pollution may not cause permanent lung damage. Many Americans do not appear to be at risk from ozone pollution. And lab animals may not develop cancer when exposed to ozone.

When they observed the same cumulus cloud, one of my students thought it looked like a brontosaurus. Another one said it was Michael Jordan going for the three-point. And another argued it was his mom in the morning with curlers in her hair. Appearances are subjective. "May" and "appear" are not words that validate policy change.

The Clean Air Trust wrote that in a national survey most people wanted air pollution standards strict enough to protect human health and asthmatic children. Passion, though, should not be used as a vehicle to support policy change.

Who would say that air pollution standards should not protect human health? Would any of us say that we don't want to protect asthmatic children? The question should have been: Would you be willing to have new air quality standards set that may protect human health more than the current standards, but also may cause a change of your lifestyle? That question doesn't attempt to exploit emotions. It states facts, and the data it yields could be considered valid.

Last week my students and I discussed how clean the air should be. Initially, everybody believed they had a right to cleaner air. I explained that as a result of forcing some groups to work harder to make air cleaner—one—you may not be able to use your lawn mowers often, or you have to go out and by a new greener one. Two—you may not be able to burn logs in your fireplace. And three—you may have to have a certain number of people in the car when you use it. One child said, "Our lawn mower works just fine. We don't want to buy a new one. And my mom likes the fireplace in the winter."

Another said, "We can't ride more than two in the car. It's just my mom and me. And we need the car." Finally, Rashaan summed it up by saying, "Ms. Kline, cleaner air might be good. But we shouldn't have to give up so much to get it. They don't have the right to take away our rights. That's just not fair." And silently I agreed with him.

Our ambition should be critical evaluation and responsible problem-solving, so that we don't take leaps, then find ourselves on slippery slopes because of our commitment to misinformation.

I urge everyone to base decisions on facts, on sound, logical thinking, and not emotional responses. Equity for all in democratic society requires fair policies, strict but attainable goals, a level playing field, and commitment to responsible citizenship. Thank you.

Mr. McINTOSH. Thank you, Ms. Kline. Obviously, your students are very wise. Let me now proceed with our second witness that Mr. Condit has already introduced to us. Mr. Wade is an almond

farmer from central California. Thank you for coming and sharing your testimony with us.

STATEMENT OF MIKE WADE, ALMOND FARMER, ATWATER, CA

Mr. WADE. Thank you, Mr. Chairman and committee members. My name is Mike Wade, and I'm a partner in an almond farmer operation in Atwater, in California's San Joaquin Valley. Our farm is approximately 70 acres, smaller than the State average, 435, but typical of the farms in our area.

Regulations governing agricultural operations aren't new in California. In 1989, rules were proposed by air pollution control officers in the San Joaquin Valley, which were intended to reduce the levels of PM10 in the valley. They included requiring every tractor that is tilling a field to carry a huge water tank to spray the soil, to prevent dust from drifting.

They also required that we would be spraying water on large storage piles of seed and fertilizer to prevent wind-blown dust, and limiting the amount of manure a cow could drop on the ground in a given day. Bear in mind, these were all seriously considered for PM10 control measures. Tractors would have to have been fitted with a water system which would haul and disperse water around tillage equipment. The inconvenience of continually filling the system throughout the day would slow field operations and increase soil compaction due to the heavy weight.

It was suggested that the surface of storage piles be sprayed with water to prevent dust from blowing. The problem with this solution is that water will ruin stored seed by increasing mold and mildew growth, and water on dry fertilizer will cause it to stick together and make it impossible to spread evenly in a field. And, finally, cows would have been prevented from standing in more than 2 inches of manure, meaning the amount they could drop on the ground in a given day would be limited.

It was suggested—and I am not making this up—that the cows wear some type of device—a diaper, I suppose—to capture the manure so the farmer could collect it and dispose of it elsewhere. The proposed PM2.5 standard could have an equally dramatic effect on farm operations such as the burning of tree prunings and grain stubble. The issue of agricultural burning is important to farmers. Burning crop residue such as orchard prunings or grain stubble is an alternative which currently has few viable options. Some of the hard choices we'll have to make are going to be between a moderate amount of open burning and the use of certain chemical pesticides, or whether we want to begin sending agricultural crop residue to landfill sights.

These early PM10 regulations were based on wrong assumptions regarding the volume of contributions of particulate matter from suspect crops. The only basis for considering how to control sources was groundless supposition on the part of air pollution control officers within the San Joaquin Valley. It was suggested that all vehicles leaving a dairy or feed lot would be required to be cleaned prior to departing the property.

Power washers and mechanical shaking equipment were some of the ideas which surfaced without considering, at the time California's drought or the effect of mechanically shaking an entire truck.

Water is at a premium in California, and shaking a truck would increase maintenance and eventually destroy the vehicle. If our industry is forced to undertake control measures like those proposed last time, it could very well lead to other adverse consequences. Let's say we could completely eliminate particulate pollution from sources such as agricultural burning by completely doing away with it.

It would still not solve all of our problems. Burning is an effective way to control certain pests and diseases without the use of chemical pesticides. These tradeoffs have not been adequately addressed. The proposed rules were developed without adequate science to even know whether the control activities would have had any positive benefit to air quality or health effects. It's the old case of ready, fire, aim. And it was that same time of that misguided rulemaking which led to the $24 million California Regional PM10 study. And as we approach the mid-point in the study, we still don't know enough about PM2.5 to make choices any better than those which were made in 1989 for PM10.

The data we need to fully understand the consequences of the proposed PM2.5 regulation is lacking. It's just premature to move ahead before we fully understand the problem and try to develop meaningful solutions. We're going to be implementing measures that will have the end result of putting people out of business. This will force buyers of agricultural products to look to sources in other countries which don't have the burdensome regulations we have in the United States.

Produce buyers will begin filling their orders with products purchased from countries that don't have the safeguards consumers rely on here at home. We need to maintain the highest standards possible. But at the same time, our regulations shouldn't result in overburdening our farmers to the point where they're not competitive and the public health is put at risk from imported food grown or packaged in substandard conditions. Although farmers in California will face definite challenges from this regulation, I believe farmers who can only grow one crop per year, such as grain crops in the Midwest, will be particularly hard hit.

In my opinion, more farms than not will be adversely affected by this regulation. And in conclusion, it doesn't seem to me that it's rational decisionmaking when we don't know whether the efforts we've put forth are even going to have the desired benefit we're seeking. There are too many questions and too many problems still to be solved for me to agree that the supposed health benefits are worth the effort. Not until we know more about minute particulate pollution and how to effectively control it can we tell the American public that the high cost of this regulation is even worth it. Thank you for the opportunity today.

[The prepared statement of Mr. Wade follows:]

A Testimony Before the House Subcommittee on National Economic Growth, Natural Resources and Regulatory Affairs on EPA's Particulate Matter and Ozone Rulemaking

The Effect of Regulations on Agricultural Operations
By Mike Wade
Almond Farmer • Atwater, California
April 16, 1997

My name is Mike Wade. I am a partner in an almond farming operation in Atwater in California's San Joaquin Valley. Our farm is approximately 70 acres—smaller than the state-average 435 acres, but typical of the farms in our area.

I'm commenting today on the proposed National Ambient Air Quality Standards on ozone and PM2.5. These standards pose a real threat to the nation's agriculture industry, its jobs and the rural way of life.

Regulations governing agricultural operations aren't new in California. In 1989, rules were proposed by the San Joaquin Valley Unified Air Pollution Control District which were intended to reduce the levels of PM10 in the Valley. They included requiring every tractor that is tilling a field to carry a huge water tank to spray the soil to prevent dust from drifting, spraying water on large storage piles of seed and fertilizer to prevent windblown dust, and limiting the amount of manure a cow could drop on the ground in a given day.

Bear in mind—these were all seriously considered for PM10 control measures:

Tractors would have to have been fitted with a water system which would haul and disperse water around tillage equipment. The inconvenience of continually filling the system throughout the day would slow field operations and increase soil compaction due to the heavy weight. Compaction would have resulted in

reduced crop yield, or at certain times of the year, in certain soil types, the heavier equipment would have been impossible to even get into the field.

Storage piles of seed and fertilizer posed a special problem. Piles are often too large to cover with plastic or canvas sheeting, so it was suggested that the surface of the storage pile be sprayed with water to prevent dust from blowing. The problem with this solution is that water will ruin stored seed by increasing mold and mildew growth, and water on dry fertilizer would cause it to stick together and make it impossible to spread evenly in a field.

And finally, cows would have been prevented from standing in more than 2 inches of manure, meaning the amount they could drop on the ground in a given day would be limited. It was suggested, and I am not making this up, that the cows wear some type of device, a diaper I suppose, to capture the manure so the farmer could collect it and dispose of it elsewhere. To further complicate matters, the Air District wasn't sure whether to classify cows as a stationary source, because they're in one location, or a mobile source because they have the ability to walk around.

The proposed PM2.5 standard could have an equally dramatic effect on farm operations such as the burning of tree prunings and grain stubble.

This issue of agricultural burning is important to farmers. Burning crop residue such as orchard prunings or grain stubble is an alternative which currently has few viable options. It performs a necessary function such as:

providing a reduction of waste to a volume which can be incorporated back into

the soil,

the elimination of pests and diseases without the use of chemical pesticides,

and prevention of transporting an enormous volume of material to landfill sites. Californians are already trying to reduce the amount of material going into landfill and the burning of crop residue helps achieve this goal.

Some of the hard choices we'll have to make are going to be between a moderate amount of open burning and the use of certain chemical pesticides, or whether we want to begin sending agricultural crop residue to land fill sites.

These early PM10 regulations were based on wrong assumptions regarding the volume of contributions of particulate matter from suspect crops. The only basis for considering how to control sources was groundless supposition on the part of air pollution control officers in the San Joaquin Valley. For example, individuals operating a dairy or feedlot would not be allowed any mud or dirt to be carried out onto a road or shoulder. Removal activities on a daily basis were going to be required causing a great deal of effort and expense without any known benefit. It was also suggested that all vehicles leaving a dairy or feedlot would be required to be cleaned prior to departing the property. Power washers and mechanical shaking machinery were some of the ideas which surfaced without considering, at the time, California's drought or the effect of mechanically shaking an entire truck. Water is at a premium in California. Shaking a truck would increase maintenance and eventually destroy the vehicle.

If our industry is forced to undertake control measures like those proposed last time, they could very well lead to other adverse consequences. Let's say we could completely eliminate particulate pollution from sources such as agricultural burning by com-

pletely doing away with it. It still would not solve all of our problems. There are negative aspects associated with everything we might do. Agricultural burning has value, not only for the farmer, but for the public too. Burning is an effective way to control certain pests and diseases without the use of chemical pesticides. Some weeds, such as dodder, are most effectively controlled by burning. The public has indicated a desire for a move toward safer chemicals and even less chemical use. Most farmers in my area, myself included, prefer less, rather than more, chemicals. These trade-offs have not been adequately addressed.

These proposed rules were developed without adequate science to even know whether the control activities would have had any positive benefit to air quality or health effects. It's the old case of "Ready, fire, aim." And it was the same type of misguided rule-making which led to the California Regional PM10 Study. This $24 million study is the most current effort to determine the sources and amounts of particulate pollution. And as we approach the midpoint in the study, we still don't know enough about PM2.5 to make choices any better than those which were made in 1989 for PM10.

In the current version of the San Joaquin Valley Unified Air Pollution Control District PM10 Attainment Demonstration Plan, agricultural activities have largely been exempt from control rules. This is because the science backing the proposed rules didn't exist and no one could adequately determine whether our industry's efforts would have done a single thing to reduce particulate pollution. It wasn't until the Regional PM10 Study began collecting data that we really started to understand the enormity of the task which lay before us. We determined that the benefits didn't justify the costs.

And the data we need to fully understand the consequences of the proposed PM2.5 regulation is lacking. It's just premature to move ahead before we fully understand the problem and try to develop meaningful solutions.

The PM2.5 standard will also affect farms who use nitrogen-based fertilizers. Because of the volatilization of ammonia, dairies with manure lagoons may face the same problem. Yet little, if any, science exists to quantify the potential problem.

Another example of potential adverse consequences is that of increased emissions from natural plant physiology. In my example discussing agricultural burning, we are currently looking at chipping orchard prunings and spreading them on the ground to decompose and return to the soil. But the decomposition process itself creates emissions. In fact, part of the Regional PM10 study being conducted at UC Davis is looking at soil NOx as a contributing secondary pollutant.

And we haven't considered the benefits of the recent introduction of reformulated diesel into the California market. This product was designed to reduce ozone pollutants, but a secondary benefit could be a reduction in PM2.5 and below, a benefit we're achieving without the implementation of the regulation we're discussing today.

Another possibility which must be considered is the fact that under strict air quality rules which affect agricultural operations, decisions could be made which crops may and may not be planted. Those which are identified as contributors, either directly or indirectly, to the degradation of air quality, may not be allowed or may only be planted as a permitted source and subject to additional regulations.

California agriculture is not static. Our farmers must have the flexibility to decide which crops are best suited to current market conditions and consumer demand. Regulations hampering my decision which crops are environmentally acceptable will limit my choices and reduce the opportunities for people like me.

I believe unnecessary regulations have a negative affect on business. There are far fewer farms operating in the United States today than ten or twenty years ago. In 1979, people involved in growing food and fiber for our nation and the world accounted for four percent of the population. Today it's less than two percent and falling. This, in turn, has caused a reduction in the number of available on-farm jobs. I believe some go out of business because they can't compete anymore. Less efficient operations have no choice but to fold-up or be bought out by others.

We are going to be implementing measures that will have the end result of putting people out of business. This will force buyers of agricultural products to look to sources in other countries which don't have the burdensome regulations we have in the US. Produce buyers will be filling their orders with products purchased from countries that don't have the safeguards consumers rely on here at home. We need to maintain the highest standards possible, but at the same time, our regulations shouldn't result in overburdening our farmers to the point where they're not competitive and the public health is put at risk from imported food grown or packaged in substandard conditions.

Farmers often "give up" because the alternatives which surround staying in business are more than they can effectively handle. Farms are sold-off for development, taking the jobs, open space and rural nature of the area. This isn't speculative. The American Farmland Trust has well documented the continual loss of farmland across the country, and I believe difficult regulations are a contributing factor.

Although farmers in California will face definite challenges from this regulation, I believe farmers who can only grow one crop per year, such as grain crops in the mid-west, will be particularly hard hit. Farm equipment tends to be very expensive. Amortizing costs over low per-acre yield crops will cause as great a burden as it will with growers from states like California and Florida where more intensive farming op-

erations take place. In my opinion, more farms than not will be adversely affected by this regulation.

It doesn't seem to me that it's rational decision-making when we don't know whether the efforts we put forth are even going to have the desired benefit we're seeking. There are too many questions and too many problems still to be solved for me to agree that the supposed health benefits are worth the effort. Not until we know more about minute particulate pollution and how to effectively control it can we tell the American public that the high cost of this regulation is even worth it.

Mr. MCINTOSH. Thank you very much, Mr. Wade, for sharing that testimony. I'll be looking forward to asking you more questions about these cow diapers.

Our next witness is Mr. Christopher Grande. Mr. Grande is with us today. He's the executive director of the International Trauma Anesthesiology and Critical Care Society. And I appreciate you coming, Dr. Grande.

STATEMENT OF CHRISTOPHER GRANDE, M.D., EXECUTIVE DIRECTOR, INTERNATIONAL TRAUMA ANESTHESIOLOGY AND CRITICAL CARE SOCIETY

Dr. GRANDE. Thank you, Mr. McIntosh. Good morning. I'm Dr. Christopher Grande. I'm a practicing physician from Baltimore. I'm a board-certified anesthesiologist and an intensive care specialist in trauma injury. I've authored and edited numerous medical textbooks and have about 30 articles published in professional journals. I'm also executive director of the International Trauma Anesthesia and Critical Care Society, or ITACCS, for short. ITACCS is a 10-year-old professional association of more than 1,000 trauma specialists and emergency room physicians, nurses, and related professionals.

I also hold a masters degree in public health from the Johns Hopkins University School of Public Health.

I'd like to thank the committee and Chairman McIntosh for inviting me to provide ITACCS' view on the proposed ozone and particulate matter standards. Before I specifically address the standards, though, I'd like to give the committee some important background information.

Every day I'm in the hospital emergency room, I see patients and problems vying for critical resources. From acute asthma patients to traumatic injuries—these are all competing public health priorities, all competing for limited available public health resources.

The focus of ITACCS is traumatic injury, often accidental in nature, such as that caused by motor vehicles, on the job, or household accidents. Injury is the leading cause of death for those under the age of 45 and is the fourth leading cause of death overall in the United States—about 150,000 deaths per year.

Trauma cuts across all of society. The injured person is not someone else. The injured patient is you, your child, your spouse, your parent. The average age of the injury victim is 20. Death from injury is the leading cause of life lost in the United States. More than twice the number of years of life lost as the next leading cause, cancer, and three times that of heart disease. According to 1990 statistics from the Center for Disease Control and Prevention, traumatic injury was responsible for approximately 3.7 million years of potential life lost.

In contrast, cancer was responsible for 1.8 million years of life lost. And heart disease was responsible for 1.3 years of potential life lost. What does this tell us? I think it was summed up approximately 10 years ago by the National Academy of Science that, "Trauma is the leading critical public health crisis in the United States today." And that statement is perhaps even more true 10 years later. How is this relevant to the debate over the ozone and particulate matter standards? It can be put simply in three words:

public health priorities. The fact is that society has limited resources that it can spend on public health. As such, public policy dictates that such resources be spent so as to achieve the biggest bang for the buck. ITACCS is not convinced, nor should the public be, that the proposed ozone and particulate matter standards are a smart way to spend our limited resources.

But I want to make clear that we are not singling out only the proposed ozone and particulate air quality standards. The proposed standards are merely the latest example in what we see as a disturbing trend over the last two decades where scarce public health resources are diverted from more clearly demonstrated beneficial uses. As the makers of our laws and ultimate allocators of our public health resources, Congress should take the lead in rationally allocating our limited resources. But how would Congress know what is a priority and what is not?

The process behind the proposed ozone and particulate matter air quality standards has not been helpful. First, the proposed rules do not provide a ranking or comparison between the estimated health effects attributed to ozone and PM and those of other public health needs. One of the health end points associated with the proposed rules is asthma. No doubt asthma is a serious issue. And public health resources should be directed at asthma.

But a recent study published in the February 1997 issue of American Journal of Respiratory and Critical Care Medicine has placed air pollution-induced asthma in perspective. In a type of study—perhaps the same one Ms. Kline referred to earlier—that has been characterized as the most reliable study of the potential health effects of ambient ozone, that is, "A Study of Children Attending Asthma Camp," air pollution was associated with a 40 percent increase in asthma exacerbation in children.

It sounds bad, but what does this really mean? According to the study authors, this increase in asthma exacerbation equates to one extra use of an inhaler among one in seven severe asthmatics on the worst pollution day. An important health problem? Possibly. But before we commit our scarce resources, wouldn't it be useful to know exactly where this health effect ranks among other public health priorities?

Second, the proposed rules do not provide an accurate estimate of what their associated opportunity costs are. For example, if a community is forced to spend its resources implementing the ozone and particulate matter standards, what other public health needs will the community sacrifice? A new trauma center? Training for its paramedics? A new ambulance?

Filling these other public health needs can produce results that cut across many public health problems. For example, ambulances and trauma centers can benefit everyone, from asthmatics to heart attack and trauma victims. It would seem good public policy, therefore, to develop and rely on an analysis of opportunity costs. Third, the true uncertainties associated with the proposed ozone and particulate matter air quality standards have not been fully presented. For example, it has been estimated and widely reported that chronic exposure to fine particulate matter causes 20,000 deaths per year.

In fact, this estimate is based on very uncertain epidemiology. It was acknowledged recently by the EPA and reported in major newspapers, such as the Washington Post, that the simple error of using an arithmetic mean as opposed to an arithmetic median reduced the estimated mortality from fine particulate matter by 5,000 deaths. It could very well be that chronic exposure to fine particulate matter in fact causes no deaths. On this point, it is greatly troubling that the data underlying this estimate has yet to be made publicly available.

Given the major confounding factors for mortality appear to be omitted from these analyses—factors like lack of exercise, poor diet and prior health history—weak epidemiological associations could easily vanish with more thorough analysis.

In stark contrast to what has been hypothesized about particulate matter and mortality, we know that about 150,000 people die every year from injury. These are real deaths, not those calculated through debatable assumptions and statistics.

One year ago, the television show, Dateline NBC, featured the story of Robert Meier. In April 1995, Mr. Meier was driving home through rural Oklahoma, heading home for Easter. Just before 4 p.m. that afternoon, Mr. Meier's van careened off the highway, slamming into a guard rail. His van rolled over five times before plummeting into a ravine. Within minutes, rescue personnel were on the scene. The ambulance took Mr. Meier to Shawnee Regional Hospital. But the doctor on duty determined that Mr. Meier had serious internal injuries and needed to be transferred to another hospital better-equipped to treat them.

But as Mr. Meier bled profusely from a ruptured aorta, no other hospital in the area would accept him, because critical resources were not available. It was not until half past midnight, 8 hours after his accident, that a surgeon was found to operate on Mr. Meier. But this delay cost Mr. Meier his life. Mr. Meier was fully covered by health insurance. He had done his part. But because of a lack of crucial resources, the system failed.

Stories like this are common. But they should not be, nor do they have to be. Proven solutions are available now, but must compete for attention and funding. More than 25 studies indicate that between 20,000 and 25,000 Americans who die each year from injury could be saved if regional trauma systems were in place across the Nation, ensuring prompt access to a qualified trauma center.

In 1973, Congress enacted the Emergency Medical Services Act to help States improve their trauma systems. But lack of Federal support made this an unfundable mandate that States could not afford to implement on their own. And as a result, significant deficiencies exist in trauma systems across the country, like the one that resulted in Mr. Meier's death. But how would Congress know this when currently there is no mechanism to identify, compare and prioritize public health needs? The ozone and particulate matter proposals, in their present formats, are a prime example of this defect of how we do public health in America.

I understand that a bill was introduced in the last Congress which would have required the comparative ranking of health risks. This would be helpful for prioritizing our public health needs. I urge Congress to continue along this track. Stimulated by this

latest raid on our scarce public health resources, ITACCS is establishing a new forum to facilitate public debate on the allocation of public health resources.

The mission of the National Forum for Public Health Priorities will be to provide policymakers with information necessary to prioritize public health needs. Those who wish to commit the public's limited resources should be required to justify such proposed commitments against all other competing needs. And as a major allocator of public health resources, Congress must ensure that public health is not shortchanged by unproductive expenditures.

Thank you for your attention. I'd be happy to answer any questions you may have.

[The prepared statement of Dr. Grande follows:]

Good morning. My name is Dr. Christopher Grande. I am a practicing physician from Baltimore, Maryland. I am a board-certified anesthesiologist and intensive care specialist in trauma injury. I have authored and edited numerous medical books and have had about 30 articles published in professional journals.

I am also Executive Director of the International Trauma Anesthesiology and Critical Care Society or "ITACCS" for short. ITACCS is a 10-year old professional association of more than 1,000 trauma specialists and emergency room physicians, nurses, and related professionals.

I also hold a masters degree in public health from the Johns Hopkins University School of Public Health.

I'd like to thank the committee and Chairman MacIntosh for inviting me to provide ITACCS' views on the proposed ozone and particulate matter standards.

Before I specifically address the standards, though, I'd first like to give the committee some important background information.

Everyday I'm in the hospital emergency room , I see patients and problems vying for critical resources. From acute asthma patients to traumatic injuries. These are all competing public health priorities. All competing for limited available public health resources.

The focus of ITACCS is traumatic injury, often accidental in nature such as that caused by motor vehicle, on-the-job, or household accidents.

Injury is the leading caused of death for those under the age of 45.[1] And it is the fourth leading cause of death overall in the United States. About 150,000 deaths every year.[2]

Trauma cuts across all of society. The injured person is not someone else. The injured patient is you, your child, your spouse, your parent.

The average age of injury victims is 20. Death from injury is the leading cause of years-of-life-lost in the U.S. -- more than twice the number of years of life lost as the next leading cause, cancer, and three times that of heart disease.

According to 1990 statistics from the Centers for Disease Control and Prevention, traumatic injury was responsible for approximately 3.7 million years of potential life lost.[3] In contrast, cancer was responsible for 1.8 million years of potential life lost. Heart disease was responsible for 1.3 million years of potential life lost.

How is this relevant to the debate over the ozone and particulate matter standards?

It can be simply put in three words, "public health priorities."

The fact is that society has limited resources that it can spend on public health. As such, responsible public policy dictates that such resources be spent so as to achieve the "biggest bang for the buck."

ITACCS is not convinced, and neither should the public be, that the proposed ozone and particulate matter standards are a smart way to spend our limited resources.

But I want to make it clear that we are not singling out only the proposed ozone and particulate matter air quality standards. The proposed standards are merely the latest example in what we see as a disturbing trend of the last two decades where scarce public health resources are diverted from more clearly demonstrated beneficial uses.

As the makers of our laws and the ultimate allocators of our public health resources, Congress should take the lead in rationally allocating our limited resources.

But how would Congress know what is a priority and what is not?

The process behind the proposed ozone and particulate matter air quality standards has not been helpful.

First, the proposed rules do not provide a ranking or comparison between the estimated health effects attributed to ozone and PM and those of other public health needs.

One of the health endpoints associated with the proposed rules is asthma. No doubt asthma is a serious issue and public health resources should be directed at asthma. But a recent study[4] published in the February 1997 *American Journal of Respiratory and Critical Care Medicine* helps place air pollution-induced asthma in perspective.

In a type of study that has been characterized[5] as the most reliable study of the potential health effects of ambient ozone -- i.e., a study of children attending asthma camp -- air pollution was associated with a 40 percent increase in asthma exacerbation in children. It sounds bad, but what does this really mean?

According to the study authors, this increase in asthma exacerbation equates to one extra use of an inhaler among one in seven severe asthmatics on the worst pollution day.

An important health problem? Possibly. But before we commit our scarce resources wouldn't it be useful to know exactly where this health effect ranks among other public health priorities?

Second, the proposed rules do not provide an accurate estimate of what their associated opportunity costs are.

For example, if a community is forced to spend its resources implementing the ozone and particulate matter air quality standards, what other public health needs will the community sacrifice? A new trauma center? Training for its paramedics? A new ambulance?

Filling these other public health needs can produce results that cut across many public health problems. For example, ambulances and trauma centers benefit everyone from asthmatics to heart attack and trauma victims.

It would seem to be good public policy to develop and rely on an analysis of opportunity costs.

Third, the true uncertainties associated with the proposed ozone and particulate matter air quality standards have not been fully presented.

For example, it has been estimated and widely reported that chronic exposure to fine particulate matter causes 20,000 deaths per year. In fact this estimate is based on very uncertain epidemiology.

It was acknowledged recently by EPA[6] and reported in major newspapers such as *The Washington Post*[7] that the simple error of using an arithmetic "mean" instead of an arithmetic "median" reduced the estimated mortality from fine particulate matter by 5,000 deaths.

It could very well be that chronic exposure to fine particulate matter, in fact, causes no deaths. On this point, it is greatly troubling that the data underlying this estimate has yet to be made publicly available.[8] Given that major confounding factors for mortality appear to be omitted from the analyses - factors like lack of exercise, poor diet, and prior health history - weak epidemiologic associations could easily vanish with more thorough analysis.[9]

In stark contrast to what has been hypothesized about particulate matter and mortality, we <u>know</u> that about 150,000 people die every year from injury. These are <u>real</u> deaths, not those calculated through debatable assumptions and statistics.

One year ago the television show *Dateline NBC* featured the story of Robert Meier.[10] In April 1995, Mr. Meier was driving home through rural Oklahoma heading home for Easter. Just before 4:00 that Saturday afternoon, Meier's van careened off the highway, slamming through a guardrail. His van rolled over five times before plummeting into a ravine. Within a few minutes rescue personnel were at the scene.

The ambulance took Mr. Meier to Shawnee Regional Hospital. But the doctor on duty determined that Mr. Meier had serious internal injuries and needed to be transferred to another hospital better equipped to treat them. But as Mr. Meier bled profusely from a ruptured aorta, no hospital in the area would accept him because critical resources were not available.

It was not until half past midnight, eight hours after his accident, that a surgeon was found to operate on Mr. Meier. But this delay cost Mr. Meier his life.

Mr. Meier was fully covered by health insurance. He had done his part. But because of a lack of crucial resources, the system failed.

Stories like this one are common. But they should not be, nor do they have to be. Proven solutions are possible now, but must compete for attention and funding.

More than 25 studies indicate that between 20,000 and 25,000 Americans who die each year from injury could be saved if regional trauma systems were in place across the nation ensuring prompt access to a qualified trauma center.

In 1973, Congress enacted the Emergency Medical Services System Act to help states improve their trauma systems. But lack of federal support made this an unfunded mandate that states could not afford to implement on their own. And as a result, significant deficiencies exist in trauma systems across the country like the one that resulted in Mr. Meier's death.

But how would Congress know this when currently there is no mechanism to identify, compare, and prioritize public health needs. The ozone and particulate matter proposals in their present formats are prime examples of this defect in how we do public health in America.

I understand that a bill was introduced in the last Congress which would have required the comparative ranking of health risks. This would be helpful for prioritizing our public health needs. I urge Congress continue along this track.

Stimulated by this latest raid on our scarce public health resources,. ITACCS is establishing a new forum to facilitate public debate on the allocation of public health resources. The mission of the National Forum for Public Health Priorities will be to provide policymakers with information necessary to prioritize public health needs.

Those who wish to commit the public's limited resources should be required to justify such proposed commitments against all other competing needs. And, as a major allocator of public health resources, Congress must ensure that the public health is not short-changed by unproductive expenditures.

Thank you for your attention. I will be happy to answer any questions you may have.

Notes

1. *Journal of the American Medical Association*. 1994;27:495.

2. National Safety Council. 1993. *Accident Facts*.

3. Centers for Disease Control and Prevention: Years of potential life lost before ages 65 and 85 — United States, 1989-1990. *MMWR* 41:313, 1992.

4. *Am J Crit Care Med* 1997;155:654-660.

5. *See* EPA Criteria Document for Ozone.

6. EPA Press Release, April 2, 1997.

7. *The Washington Post* (April 3, 1997).

8. *The Wall Street Journal* (April 7, 1997).

9. *See, e.g., American Journal of Respiratory and Critical Care* 1995;151:669-674 (the "Pope" study).

10. *Dateline NBC* (March 17, 1996).

Mr. McINTOSH. Thank you very much, Dr. Grande. I appreciate your testimony and look forward to a chance to talk with you more.

Our fourth witness on this panel is Mr. Fred Congress, who is founder and president of Congress Enterprises. Mr. Congress, thank you for coming to testify today.

STATEMENT OF FRED CONGRESS, PRESIDENT, CONGRESS ENTERPRISES

Mr. CONGRESS. Thank you, Mr. Chairman, for allowing me to come. Good morning, ladies and gentlemen. My name is Fred Congress, and I'm from Gary, IN. I'm the founder and owner of Congress Enterprises, Inc., a company I started back in 1953. Today, Congress Enterprises is the sole source of employment for three generations of my immediate family. My four children and three grandchildren assist me in running this business.

We're basically two-dimensional in terms of our business. We supply home heating oil, diesel fuel, gas on a wholesale and retail basis. Also, we have expertise on the structure demolition business. In essence, we have a coming and going business tailored for Gary. The fuel industry was created by a great need generated by the thriving and bustling business climate of Gary back in the 1950's and 1960's. The demolition business was created by the demise of much of the great growth of Gary and the continuation of clearing and renovating idle neighborhoods and industrial zones.

When the fuel business was thriving, Gary had over 32,000 workers in its steel mills, with the majority of the people that were working in the mills living in the city limits of Gary. Today, the mills only provide jobs for 7,000 workers. And only 1,600 of those workers live in Gary. Gary once had a population of 200,000 people. By 1980, it dropped down to 157,000 people. And today we have approximately 105,000 inhabitants.

In reflecting back on my fuel business, I point to 1973 as a benchmark in reference to the peak of my business. It was here that the great oil embargo went into effect and taxes, inflation and stringent regulations on the environment raised costs and retail price to the point of causing dramatic havoc on the steel, auto and fuel industries. My fuel oil business today is only one-twentieth of what it was in 1973.

The demand for steel lost out to foreign competition and shrinking American auto sales. Jobs went, as well as good citizens. Schools became vacant. Neighborhoods began to decay with unemployment and welfare skyrocketing along with crime and despair. I consider it a rare exception and a slight miracle that my family—that means my children and grandchildren—have remained as one. Many families cannot make that claim. Much of this, along with the great blessings of God, is due to the fact that we are business owners.

We, through entrepreneurship, have made our own future. However, it has not been easy and without challenges. Today, the challenges seem to be at their greatest. The Clean Air Act is effective, even though it came with economic restraints. I feel that it was necessary, as I reflect back on the days when the sun went down in Gary at 2 p.m., due to the air pollution caused chiefly by the steel mills. The air quality is much better. We all admit. The only

regret is maybe more preparation and study could have achieved the same results without the economic ruin.

The Clean Air Act partnered with the rising costs of business, opportunistic foreign competition, taxes after taxes, has put Gary and its remaining inhabitants on the endangered list as a community. Please don't take me wrong. The Clean Air Act, along with other environmental efforts, have made this country move in the right direction in regards to environment. There have been many new businesses resulting from this. If only those who lost the plant jobs could have gone directly into environmental jobs, then we wouldn't have all of the results we see today.

There were costs to be paid. And much of that was not equitable to the common family. The EPA is now proposing a more stringent ozone standard, and want to establish a new PM standard for particulate matter emissions, at or below 2.5 microns. Both of my businesses are conscious of environmental regulations. And we will be directly affected. The fuel oil distribution, and even the demolition, which involves heavy equipment, are sensitive to the applicable laws.

My family is thankful for the capitalistic system that has allowed us to work together for over 44 years. We have made it despite extreme challenges created by economic change caused by regulation and policy that has not been business-friendly. Big business, little business—it's all the same, as the business world is one big circle. What affects one segment will eventually have an effect on the other.

If I were to die today, I would not have a clue as to if my family would continue with the business as more and more regulations are poured on them. This worries me extremely. For the sake of my children, grandchildren and the beautiful babies and generations to come, I plead for us to move on new regulations in a prudent manner. Again, in the past, perhaps we could have made the great strides in environmental cleanup and air quality without as much pain. Some very good people and families have been torn apart right before my eyes.

Let us make the recent past the last unnecessary struggle to make the world safe and great. The environment and economics can work together. By doing so, we can create stronger regulations and maintain a strong economy simultaneously.

Finally, we remaining Garyites still have hope for the future. Let policy and regulation be friendly to us and the many other wonderful communities. We, the Congress family, have much fear about the proposed regulations that will make the current Clean Air Act a start of a longlasting struggle rather than a "bite the bullet" approach which has been successful and lasting in its goal. May the casualties end at long last. Please, EPA, take it—meaning, policing the environment—in a more prudent manner, and let us all win. Thank you, sir.

Mr. MCINTOSH. Thank you very much, Mr. Congress. And welcome to a fellow Hoosier. Let me now introduce our final witness on this panel, Dr. Alfred Munzer, who is the past president of the American Lung Association. Welcome, and thank you for coming today.

STATEMENT OF ALFRED MUNZER, PAST PRESIDENT, AMERICAN LUNG ASSOCIATION

Dr. MUNZER. Mr. Chairman, thank you for including me in this early panel so I could tend to my patients this afternoon. I am Alfred Munzer, a physician specializing in diseases of the lung and past president of the American Lung Association. I am also director of Pulmonary and Critical Care Medicine at Washington Adventist Hospital in Takoma Park, MD.

My testimony includes disclosure of funds received by the American Lung Association from the Federal Government as required. I am delighted to be here today, specifically because I care deeply about children like the ones Faith Kline talked about earlier. Because children in the inner cities will bear a disproportionate burden of the health effects of air pollution. The Clean Air Act represents an act of genius for limited government. It sets out a broad vision of clean air for us, for generations to come. And it sets standards that we have arrived at through a broad national consensus.

The Environmental Protection Agency recently completed the most comprehensive review of medical research on ozone and particulate matter. For both pollutants, the Agency correctly concluded that the current standards are inadequate and must be tightened. The American Lung Association agrees with this conclusion. We strongly support EPA's effort to set standards that will be more protective of public health. Administrator Browner is to be commended for her leadership and efforts to tighten the ozone and particulate matter standards. EPA analyzed the peer-reviewed literature and appropriately determined that science supports strengthening the current particulate matter standard by the addition of a fine particle standard: the so-called PM2.5 standard for particles less than 2.5 microns in diameter. The American Lung Association believes that science supports EPA's proposal to set a standard for fine particles. We believe, however, that the level should be significantly tighter than those proposed by the EPA.

The American Lung Association's report, "Gambling With Public Health 2," shows how many more Americans will be protected by the American Lung Association-recommended fine particle standard. The ALA recommends that the EPA adopt a daily fine particle standard of no more than 18 micrograms per cubic meter, rather than EPA's proposed level of 50 micrograms per cubic meter. ALA also recommends that EPA adopt a yearly average fine particle standard of 10 micrograms per cubic meter rather than EPA's proposed level of 15.

Our report underscores the need for a more protective air quality standard. Similarly, several studies published over the last 5 years have linked ozone exposure at relatively low levels with an increase in hospital admissions for respiratory causes, including asthma, chronic obstructive lung disease, and pneumonia. As a result of our review of these studies, the American Lung Association recommended a standard of 0.070 parts per million. And one exceedance per year is consistent with the bottom of the range included in EPA's ozone standard in the staff paper.

In our view, this level provides the most public health protection with a margin of safety as required by the Clean Air Act. According to an American Lung Association report, "Gambling With Public

Health," released in September 1996, an estimated 11.7 million children, 7.7 million elderly, 2.8 million people with asthma and 3.2 million people with chronic obstructive lung disease live in counties that would exceed the ALA's proposed standard but would be unprotected by the proposed EPA staff standard.

As a physician, I see the health effects of air pollution in my patients every day. Air pollution hurts the lung. For my patients with serious lung disease, for children, whose lung defense mechanisms are not yet fully developed, and for the elderly, whose lungs may no longer be able to withstand the constant assault of poisonous air, the law and science require EPA to move forward with new standards.

Many ask about the health effects of air pollution. For some of my patients, and for otherwise healthy adults as well, commonly measured levels of ozone and particulate pollution cause coughing, wheezing, and discomfort when breathing. For my patients with asthma, chronic bronchitis and other lung diseases, particles can cause more serious breathing difficulty. They may end up in my office, the emergency room, or be admitted to the hospital.

Finally, elevated particle levels are linked to premature death. Fine particles are especially insidious, because the body cannot defend itself against these particles. They really behave like air. Large airborne particles are prevented from being deeply inhaled by the nose and upper airways. But fine particles are small enough to avoid the body's line of defense and are inhaled deeply into the lungs. That's where the most serious damage occurs. People with cardiovascular disease or lung diseases like asthma are especially vulnerable.

The health effects of air pollution is not an abstract concept for my patients. It has a daily impact on their lives. Elevated air pollution levels can leave people struggling to breathe. Many may question the science and argue that tighter standards are unnecessary, and argue that EPA's estimates are wrong. The rhetoric is wrong and foolish. The economists' estimates are arbitrary. The suffering that my patients experience due to unhealthy air is real.

Finally, I hope that the foes of the new standards, those who argue that tighter standards are not worth the costs, will listen to these vulnerable populations to understand what the real price of air pollution is and the impact it has on people's lives. Thank you.

[The prepared statement of Dr. Munzer follows:]

MISTER CHAIRMAN AND MEMBERS OF THE COMMITTEE:

My name is Alfred Munzer, M.D. a physician specializing in diseases of the lung and past President of the American Lung Association. I am also Director of Pulmonary and Critical Care Medicine at the Washington Adventist Hospital in Takoma Park, Maryland.

I am pleased to be here this morning to present testimony on the benefits of strong air quality standards.

The American Lung Association believes that the science supports EPA's proposal to set air quality standards that would be more protective of public health. We believe, however, that the levels should be significantly tighter than those proposed by EPA. For example, in a report released in January of this year, the American Lung Association demonstrated that EPA's proposal for the control of fine particles of 2.5 microns and below would actually fall short of what is needed to provide a safety margin to protect the public health. Using monitored particulate matter data from 1993-95, the report concludes that approximately 2 to 5 million people with chronic bronchitis and emphysema, 2 to 5 million people with asthma, and 1 to 3 million people with coronary heart disease would be unprotected by EPA's proposed standard. In addition to these populations, the ALA report found that about 7 to 17 million children and 5 to 12 million elderly live in areas that would not be protected by EPA's proposals.

Similarly, several studies published over the past five years have linked ozone exposure at relatively low levels with an increase in hospital admissions for respiratory causes, including asthma, chronic obstructive pulmonary disease, and pneumonia. As a result of our review of

these studies, the ALA recommended standard of 0.070 ppm, one exceedence per year is consistent with the bottom of the range included in EPA's ozone standard in the Staff Paper. In our view, this level provides the most public health protection with a margin of safety required by the Clean Air Act. According to a report released in September, 1996, an estimated 11.7 million children, 7.7 million elderly, 2.8 million people with asthma and 3.2 million people with chronic obstructive lung disease live in counties that would exceed the ALA proposed standard but would be unprotected by the proposed EPA staff standard.

In our view, the EPA has considered a large body of compelling evidence that demonstrates that particulate matter is associated with early and unnecessary death, aggravation of heart and lung diseases, reduction in the ability to breathe normally and increases in respiratory illnesses, leading to school and work absences.

The Current PM10 NAAQS Does Not Protect Healthy or Vulnerable People From Fine Particle Air Pollutants.

PM effects on lung function, acute respiratory function and medication use, mortality and hospital admissions have been documented in numerous studies at levels well below the current 24-hour NAAQS for PM10. These effects have been observed in widely differing locations, seasons, weather conditions and using a variety of methodologies. The consistency of the findings suggest other factors such as climate, other pollutants or unknown factors are not causing these effects. The body of research documenting the adverse impact that particulate pollution has on acute respiratory symptoms, illness and death is greater today than the body of

information available any time in the history of the Clean Air Act when previous standards were set for particulate pollution.

One study linked ambient air pollution data with information from an American Cancer Society data base of 550,000 adults from all 50 states whose health histories were followed for seven years. The study, after accounting for smoking, obesity, age, alcohol use and other potential confounding factors, found people living in the most polluted city had a 17 percent greater risk of premature mortality due to PM exposure than the people living in the least polluted city. In another study, researchers in Utah discovered that increases of inhalable particulate matter resulted in a 40 increase in overall absences from school by children. A third study looked at more than 8,000 people in six US cities over a period of 15 years. The risk of early death in high-level areas was 26 percent higher than in areas with the lowest levels of pollution.

Researchers with EPA and Harvard's School of Public Health studied nearly 1,850 school children in six U.S. cities (Watertown, MA; Kingston-Harridan, TN; St. Louis, MO; Steubenville, OH; Portage, WI; and Topeka, KS). When ozone (smog) levels went up, some children coughed more; when ozone and sulfur dioxide levels went up, some children suffered from such lower respiratory symptoms as wheezing, chest pain, coughing and phlegm. When particulate pollution increased, ALL children suffered symptoms -- even when the pollution was substantially below the current national danger standard. A reanalysis of this study in 1993 suggests that the smallest particles, less than 2.5 microns in diameter (PM2.5) are specifically responsible for the observed associations with daily mortality.

And finally, a survey of earlier mortality studies reveals that the average lifespan shortening resulting from exposure to particulates may be as much as two years. That implies that many individuals in the populations have lives shortened by years -- not days as some critics contend.

THE CURRENT OZONE NAAQS DOES NOT PROTECT HEALTHY OR VULNERABLE PEOPLE FROM ADVERSE EFFECTS OF OZONE

Numerous epidemiological studies have documented that as ozone levels rise, so to do emergency room visits and hospital admissions. At ozone levels 33 percent below the current National Air Quality Standard (NAAQS) children at summer champ and health exercising adults can not breathe normally, suffering from shortness of breath, coughing, painful breathing and loss of lung function. Data from Toronto and Southern Ontario showed large increases in hospital admissions due to ozone and acidic air pollution, even at levels well below the current health standard. On average summer pollution days the ozone levels, typically below the current U.S. standard, were linked to 29 percent of all respiratory admissions. On high pollution days ozone and acid particles were associated with approximately 50 percent of respiratory hospital admissions. Another study of hospital respiratory admissions for infants in selected Ontario hospitals found that relatively low levels of summer pollutants (ozone and sulfate particulate matter) accounted for 16 percent of such admissions. Another study found that when ozone levels were above .60 parts per million (ppm) -- a level one-half of the current standard -- emergency room visits for asthma occurred 28 percent more frequently. The researcher concluded that "ozone adversely affects asthmatics at levels well below the current U.S. standard. Other recent studies of children found that ozone smog causes inflammation of the

upper airways of normal, healthy children at concentrations well below the current health standard.

However, many researchers believe the documented hospitalizations are the "tip of the iceberg" in defining the health effects of ozone. Exposure to ozone at the current standard can cause a decrease in lung function even in healthy children and adults. Children are more susceptible to the effects of air pollutants than adults because their lungs and defense systems are still developing, they breathe more air in proportion to their body weight than do adults, and they tend to be more active in the summer when ozone is a particular problem. Many scientists and physicians are concerned that chronic irritation from breathing ozone might influence the normal healthy development of the lung during childhood and contribute to the development of serious lung disease when our children become adults. Moreover, children with preexisting lung problems pay the greatest price for breathing polluted air. For example, some 10 percent of American children develop symptoms of asthma at one time or another. That number has doubled over the past 18 years.

While it has yet to be proven that ozone causes asthma, although important evidence has been found. What we do know is that exposure to ozone in this increasingly large number of children poses a serious threat to their respiratory health. Exposure to ozone for these children means that the inflammation in their lungs will be increased and that preexisting inflammation and irritation will not heal. For some of these children this exposure means increased suffering, missed work, missed school, and may eventually mean school failure and lost opportunities. For other children in our cities it means that a severe asthma attack that have been controlled by treatment in an

intensive care unit will not be controlled and that these children will die. According to Dr. John McBride, a pediatric pulmonlogist practicing in Rochester, New York and specializing the care of children and adolescents, exposure to ozone means greater health care costs for hospitalizations, medications, and physician visits and absences from work and school. In a June, 1996 statement, Dr. McBride said:

> "What I most what to get across to you is this: for many asthmatic children, ozone exposure means inconvenience and missed play and school opportunities. For others it means serious suffering and even death."

Other studies of increased mortality in Los Angeles and New York City clearly linked ozone to increased death rates. A 10 percent increase above average ozone levels was associated with approximated 2 additional deaths per 1000; similarly, a 50 percent increase above average ozone levels (not uncommon in the summer) was associated with 10 additional deaths per 1,000. Yet another study showed that healthy young adults developed significant lung function reductions, additional coughing and breathing pains, and increased airway reaction to irritants when exposed to ozone at levels between .80 to .120 ppm while moderately exercising for five hours. The exercise was designed to mimic that of a construction worker. Lung inflammation was also documented with these exposures. A review of studies conducted on healthy exercising adults revealed that while most subjects experienced a 5 to 15 percent decrease in lung function at or below the current federal standard, some sensitive individuals suffered a debilitating 40 to 50 percent loss. And finally, a study of the respiratory effects of ozone on amateur cyclists found that healthy exercising men suffered significant symptoms such as shortness of breath, chest tightness, and wheezing at ozone concentrations well below the current U.S. ozone standard. Although the primary effects in the impressive body of research which we believe supports a

tighter ozone standard primarily relates to effects ozone has in causing or contributing to illness, which may result in hospitalization, the American Lung Association would like to call attention to the growing body of research linking ambient levels of ozone to mortality. Indeed, several studies have been published since CASAC reviewed the Staff Paper and the Criteria Document for Ozone, in July, 1996. While the EPA has identified the link between ozone and early death as a "factor" taken into consideration, it explicitly relied on the morbidity effects as the principal rationale for setting a new standard because of the limited amount of available information related to mortality effects.

As Congress and the public review EPA's proposal for a tighter ozone standard , we submit this data must not be ignored. Some of these studies show that, in some cities, as ozone increases to levels commonly found in the United States, the risk of premature death increases from two to six percent among the people exposed to this air pollution. A complete list of the studies assessing the link between ozone and mortality is attached to this testimony. EPA has been criticized for including reduction of mortality among the benefits identified in its Regulatory Impact Analysis for the ozone proposal. We would assert that given the growing body of evidence linking ozone exposure to early death, EPA should provide estimates of the benefits of reducing ozone-related mortality even though this data may not be sufficient by itself to provide the scientific basis for a tighter standard.

As adults we share a responsibility to provide for and protect our children and other vulnerable populations. As parents, most of us are naturally programmed to spare no sacrifice for the benefit of our own children. It is just as important that, as a society, we protect all of our children and

other vulnerable populations from harm. We must take action to ensure that our children and others with respiratory problems do not suffer simply by breathing the air in our cities.

Studies Linking Ozone With Daily Mortality

Anderson et al., 1996. Air Pollution and Daily Mortality in London: 1987 - 92. *BMJ* 312: 665-669.

Bates, D. 1995. Ozone: A Review of Recent Experimental, Clinical and Epidemiological Evidence, with Notes on Causation, Part 2. *Can. Respir. J.* 2(3): 161-171.

Cifuentes, L.A. and L. Lave, 1997. Association of Daily Mortality and Air Pollution in Philadelphia, 1983 - 1988. *Journal of Air Waste Manage. Assoc.* (In press).

Dockery et al., 1992. Air Pollution and Daily Mortality: Associations with Particulates and Acid Aerosols. *Environmental Research* 59: 362-373.

Hoek et al., 1997. Effects of Ambient Particulate Matter and Ozone on Daily Mortality in Rotterdam, the Netherlands. Accepted, to *Archives of Environmental Health.*

Ito, K. and Thurston, G.D., 1996. Daily PM10/Mortality Associations: An Investigation of At-Risk Subpopulations. *Journal of Exposure Analysis and Environmental Epidemiology* 6(1): 79-225.

Katsouyanni et al., 1993. Evidence for Interaction Between Air Pollution and High Temperature in the Causation of Excess Mortality. *Archives of Environmental Health* 48(4): 235-242.

Kinney, P.L. and Ozkaynak, H. 1991. Associations of Daily Mortality and Air Pollution in Los Angeles County. *Environmental Research* 54:99-120.

Kinney et al., 1995. A Sensitivity Analysis of Mortality/PM10 Associations in Los Angeles. *Inhalation Toxicology* 7: 59-69.

Loomis et al., 1996. Ozone Exposure and Daily Mortality in Mexico City: A Time-Series Analysis. Health Effects Institute Research Report Number 75, October 1996.

Moolgavkar et al., 1995. Air Pollution and Daily Mortality in Philadelphia. *Epidemiology* 6(5):476-484.

Ostro, 1995. Fine Particulate Air Pollution and Mortality in Two Southern California Counties. *Environmental Research* 70: 98-104.

Ostro et al., 1996. Air Pollution and Mortality: Results from a Study of Santiago, Chile. *J. Of Exposure Analysis and Environmental Epidemiology* 6:97-114.

Ozkaynak et al., 1995. Associations Between Daily Mortality, Ozone and Particulate Air Pollution in Toronto, Canada. Paper presented at the Colloquium on Particulate Air Pollution, Irvine, CA, January 24-25.

Saldiva et al., 1994. Association Between Air Pollution and Mortality due to Respiratory Diseases in Children in Sao Paulo, Brazil: A Preliminary Report. *Environ. Res.* 65: 218-225.

Saldiva et al., 1995. Air Pollution and Mortality in Elderly People: A Time-Series Study in Sao Paulo, Brazil. *Archives of Environmental Health* 50(2):159-163.

Samet et al., 1996. Air Pollution and Mortality in Philadelphia, 1974 - 1988. Report to the Health Effects Institute on Phase IB: Particle Epidemiology Evaluation Project, March 25, 1996 (Accepted for publication).

Samet et al., 1997. Particulate Air Pollution and Daily Mortality: Analysis of the Effects of Weather and Multiple Air Pollutants. The Phase I.B Report of the Particle Epidemiology Evaluation Project. Health Effects Institute, March 1997.

Sartor, F. et al., 1995. Temperature, Ambient Ozone Levels, and Mortality during Summer 1994, in Belgium. *Environmental Research* 70: 105-113.

Schwartz, J. 1991. Particulate Air Pollution and Daily Mortality in Detroit. *Environmental Research* 56:204-213.

Shumway et al., 1988. Modeling Mortality Fluctuations in Los Angeles as Functions of Pollution and Weather Effects. *Environmental Research* 56:204-213.

Sunyer et al., 1996. Air Pollution and Mortality in Barcelona. *J. Of Epidemiology and Community Health* 50 (Suppl. 1): S76 - S80.

Touloumi et al., 1997. Short Term Effects of Ambient Oxidants Exposure on Mortality: A Combined Analysis Within the APHEA Project. *American Journal of Epidemiology* (in press).

Verhoeff, A.P. et al., 1996. Air Pollution and Daily Mortality in Amsterdam. *Epidemiology* 7(3): 225-230.

Wyzga, R.E. and F.W. Lipfert, 1995. Temperature-Pollution Interactions with Daily Mortality in Philadelphia. In: Particulate Matter: Health and Regulatory Issues: Proceedings of an International Specialty Conference Sponsored by the Air and Waste Management Association; April; Pittsburgh, PA., pp. 3-42.

Wyzga, R.E. and F.W. Lipfert, 1996. Ozone and Daily Mortality: The Ramifications of Uncertainties and Interactions and Some Initial Regression Results. In: Vostal, J.J., ed., Tropospheric Ozone: Critical Issues in the Regulatory Process: Proceedings of a Specialty Conference Sponsored by the Air and Waste Management Association; May 1994; Orlando, FL., pp. 453-487.

Zmirou et al., 1996. Short Term Effects of Air Pollution on Mortality in the City of Lyon, France, 1985 - 90. *J. Of Epidemiology and Community Health* 50 (Suppl. 1): S30 - S35.

Mr. MCINTOSH. Thank you very much, Dr. Munzer. We'll now proceed with questions to each panel in blocks of 5 minutes of time per Member. And if we've got time—one of the witnesses on our second panel is on a tight schedule. I'm going to try to get that second panel started as close to 11 as possible.

I've got a couple of questions that I'd like to ask. The first one is for Ms. Kline. I understand that you attended one of EPA's workshops on the PM ozone issue that was held in Philadelphia last year. Could you describe it, the way in which the workshop was conducted? And do you think it was a fair presentation of the subject matter at that workshop?

Ms. KLINE. It was a public meeting that was held in July 1996. And at that meeting I was basically a spectator. And I became a little upset by lunch time because I watched what I thought was happening—what appeared to me was happening was that folks were coming up to the front to make comment, and they were being—we were being told that their attitudes and their testimony represented public—the idea of what the public was thinking. It represented the mind-set of the public.

And, in fact, they spoke only to one side of the question. And it wasn't an accurate—in my mind it was not an accurate example of what the whole public, the broad spectrum, which is what EPA had initially said they were looking for. It wasn't. It did not represent the broad spectrum of public comment.

Mr. MCINTOSH. Did you feel that it addressed the best possible ways to benefit people who have asthma? And I guess, what do you think we as a Congress should do to benefit people who do suffer from asthma?

Ms. KLINE. I felt that there were—and, again, that's why I mentioned the emotional responses. There were people that were being wheeled up in wheelchairs, and people that were using medication while they were speaking. And, to me, it appeared to be contrived. And it felt upsetting to me. And I feel that Congress really needs to, as Dr. Grande said, look at some other issues that are out there that really impact.

For instance, my children. I'm not convinced that it's ozone that hurts my children. I'm real concerned about that wall that's dripping plaster into my room everyday. You talk about stuff that we breathe. This school. This is every day, all day long for some of my children. And me, too. And I think that we need to look at some other things besides just this. And I'm not convinced that the science is there. I'm really not.

Mr. MCINTOSH. Thank you. And if I might introduce into the record an article that was in the Washington Post yesterday, actually, titled "New Attack on Asthma: Doctors Now Recommend Early Aggressive Treatment." In the article it discusses how, coincidentally, we've seen an improvement in air quality because of the Clean Air Act, we've seen at the same time an increase in asthma suffering. They feel perhaps the greatest cause is not ambient ozone or particulate matter, but causes in indoor air, dirty air, with mites and other things.

Ms. KLINE. Right.

Mr. MCINTOSH. I wanted to check with you, Dr. Munzer—do you disagree with the basic premise of that article, that perhaps the best thing we could do for asthma sufferers would be to find ways to have cleaner indoor air?

[The information referred to follows:]

New Attack on Asth

Doctors Now Recommend Early, Aggressive Treatment

BY SALLY SQUIRES

At just 3 months old, Chase Vernon of Centreville caught a cold that quickly developed into a very bad case of bronchitis. Although he got better, the bronchitis was followed by a cycle of chronic ear infections, daily coughing and other respiratory problems that left him weak and often gasping for air.

His parents took him to a dozen doctors over the next 13 months. One physician diagnosed food allergies and advised removing soy, eggs and bananas from the child's diet, but that brought no improvement. Another suggested that the problem was just a respiratory condition the youngster would probably outgrow. But Chase awoke one day last December with mottled skin and labored breathing and was rushed to the pediatrician's office for emergency treatment.

Last December, Chase was diagnosed with asthma. Doctors prescribed a strict regimen of medications including daily use of an inhaler, a nasal spray and a nebulizer, which turns medications into a spray. When he starts wheezing, which happens every few weeks, his mother gives him a five-day course of oral steroids. The doctors advised removing all stuffed animals from Chase's room and keeping him away from pet hair, natural fibers, such as wool, and feathers. They also recommended that his mattresses and pillows be covered in plastic to reduce exposure to microscopic dust mites that can often trigger an asthma attack. Perfume is banned from the home, as is any tobacco smoke. The floors are cleaned with a special high-efficiency vacuum cleaner, dusting is regularly done several times a week and the family takes great care to avoid aerosol cleaning products that could irritate Chase's delicate respiratory system.

The 19-month-old "does better now because we know what signs to look for and can control his asthma . . . ," said his mother, Laurie Vernon. "But the doctor says his bronchial tubes were so damaged that he will probably be affected [with asthma] for the rest of his life."

Asthma is a chronic respiratory disease in which the small airways in the lungs become inflamed and the patient wheezes and has trouble breathing. It is frequently under-diagnosed and under-treated, especially in children, and can lead to a host of complications—including death, according to experts. It claims more than 5,000 lives a year.

New treatment guidelines released in February by the National Heart, Lung and Blood Institute (NHLBI), part of the National Institutes of Health, offer a dramatic shift in the way physicians and patients deal with asthma. Doctors are advised to diagnose asthma in its mild, early phases and treat it aggressively so that it doesn't worsen and cause permanent scarring in the lungs. As recently as 1991, experts had suggested that doctors introduce one asthma medication at a time and step up dosages only when the conditions worsened. The new recommendations urge doctors to hit asthma hard, with multiple drugs if necessary, to control symptoms as soon as they appear. That often means using a powerful combination of inhaled medications and oral drugs.

BY BARBARA L. JONES/JR FOR THE WASHINGTON POST

Cory Lloyd, 7, of Willingboro, N.J., spends 12 minutes three times a day inhaling medication through a nebulizer to prevent asthma attacks.

Asthma afflicts 15 million Americans and accounts for nearly half a million days of hospitalization annually, according to the new guidelines. Hospitalization rates are highest among blacks and children.

Asthma cases have more than doubled since 1980, according to the federal Centers for Disease Control and Prevention. No one understands exactly why this chronic respiratory condition is on the rise, but it may be due to better detection and an increased awareness that lead to earlier diagnosis of mild and moderate cases. The combination of outdoor air pollution and tightly closed, energy-efficient houses may also play a role.

But as Jack Elias, director of a federally funded asthma research center at Yale University, put it, "No one answer seems to explain everything. It may end up that a lot of little things are going on that add together to increase the rate."

New Theories

In the past six years, researchers have identified inflammation as the key factor in the development of asthma. Asthma "is now defined as a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role," the guidelines note. "In susceptible individuals, this inflammation causes recurrent episodes of wheezing, breathlessness, chest tightness and cough, particularly at night and in the early morning."

Hay fever and other allergies have long been implicated in the development of asthma because the vast majority of asthma patients are found to also have typical allergy symptoms. Recent studies have begun to unravel the way in which such disparate allergens as cigarette smoke, tree pollen, cockroach droppings and dust mites can trigger a complex reaction in the human body that throws the immune system into overdrive and produces a highly reactive respiratory tract.

Many scientists believe this process is accelerated by exposure to allergens that rev up the immune system. But some researchers have suggested that as children are increasingly inoculated to prevent common childhood ailments such as measles they may not develop a crucial immune response that helps protect against asthma.

According to this very controversial theory, if you live in places where there is a high incidence of childhood diseases or of TB, your immune system will be conditioned to be very good at producing one type of white blood cell called a lymphocyte, said Yale University's Elias. But in the United States and other parts of the developed world, where people don't get these diseases as often, the immune system shifts toward overproducing another type of lymphocyte that may make the airways prone to inflammation. And it is this second type of response "that is thought to give you asthma and allergies," Elias said.

A study by British and Japanese researchers, published in January in the journal Science, illustrates the theory nicely, Elias said. It followed Japanese schoolchildren who had received a tuberculosis vaccine when they were infants, again at 6 years and at 12 years of age. The vaccine, which is not commonly used in the United States, does not produce an immune system response to tuberculosis in all individuals.

The researchers checked how effective the vaccine was in stimulating an anti-TB response in each of the children and if they had any asthma symptoms. They found that schoolchildren who had the strongest immune response against tuberculosis were the least likely to have asthma while those who had the weakest response were the most likely to have asthma.

Indoor air pollution is also believed to play a role in the increase in asthma. Air-tight, energy-conserving homes and offices with windows that can't open may allow such substances as mold, dust mites and cockroach dander to build up. "Maybe, by diminishing the air exchanges in homes, people are being exposed to substances that would be present normally but not at such high concentrations," Elias said.

There is growing evidence that certain forms of viral infection may predispose people to developing asthma as well. One virus under investigation is a respiratory syncytial virus (RSV), a common infection that can be particularly serious for babies and toddlers.

See ASTHMA, Page 14

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WASHINGTON POST HEALTH/APRIL 15, 1997

ASTHMA, *From Page 12*

"If you look at infants and young children who get really sick with RSV, they have an increased risk of asthma," Elias said.

Making a Diagnosis

Controlling asthma begins with early detection, the new guidelines point out. Many children and adults are not diagnosed until they have spent months—and sometimes years—struggling with symptoms.

That confusion is caused because asthma so often mimics other less lethal diseases. While wheezing and shortness of breath are the most typical signs of asthma, the condition can also be mistaken as chronic bronchitis, a persistent cold or a hacking cough that never seems to go away. Sometimes patients and doctors misdiagnosis it as simple allergic reaction. Detection of asthma is often bought in children who cannot accurately describe their symptoms.

"Under-diagnosis of asthma in adults is much less of a problem than under-diagnosis in children, where so often asthma is related to a viral infection and gets written off as bronchitis," said Harold Nelson, of the National Jewish Medical and Research Center in Denver and a member of the panel of experts that wrote the new treatment guidelines.

Those guidelines seek to help physicians make such diagnoses by expanding the definitions that were included in the 1991 recommendations. The new definitions, experts believe, better describe the various stages of the disease: mild intermittent asthma to severe persistent asthma. (See chart on page 16.) They vary from a patient who has an occasional bout of coughing or wheezing to people who have life-threatening attacks on a regular basis.

The guidelines underscore how the severity of asthma can differ widely, even within the same family. Kathy and Michael Lloyd's four children are a good example. In that Willingboro, N.J., family, 11-year-old Natasha and 3-year-old Kyle experience mild attacks. Natasha wheezes only during physical activity, a type of asthma known as exercise-induced and under the new guidelines classified as mild and intermittent. Kyle, who was diagnosed with asthma at age 16 months, also has a very mild form of the condition. Neither require preventive therapy, but take drugs as needed to control their infrequent symptoms.

Their two brothers have much more severe asthma, however, and sometimes require emergency care. Cory, 7, takes three to four medications daily to control his asthma. His brother, Michael, 8, routinely takes two different asthma drugs each day. Even then, there are times when they must have special care. Their mother keeps a nebulizer in the car, at school and always carries special emergency medications should they have an attack.

BY BARBARA L. JONES FOR THE WASHINGTON POST

Kathy Lloyd adjusts the nebulizer for her son Cory as he inhales his medication.

Controlling Symptoms

The new treatment guidelines recommend routine allergy testing for asthma patients, the best way to determine what is most likely to trigger an attack. Although allergy testing is not always accurate, especially in children, it can give a sense of what allergens people with asthma should try to avoid.

"Avoiding things that one is sensitive to can reduce inflammation in the lung, change the immune system and then you don't need as many medications," said Shirley Murphy, professor of pediatrics at the University of New Mexico School of Medicine and chair-

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Many Sorts of Drugs Are Enlisted in the Fight Against Asthma

Once people with asthma had only a few drugs to reach for when an asthma attack occurred. But today the old standbys of asthma treatment are being used in combination with powerful new medications that can prevent an attack.

There are several classes of drugs that can help keep asthma in check. They include quick-relief drugs that halt an asthma attack fast and long-term medications that help prevent attacks from occurring. Among the medications available are:

Anti-inflammatory drugs. Corticosteroids are some of the most potent anti-inflammatory medications available. Inhaled forms of corticosteroids are commonly used for long-term control because their action is limited to the respiratory system.

Although the idea of taking steroids frightens many people because of the potential for adverse effects, inhaled corticosteroids "are well tolerated and safe" when used at the recommended dosages. The majority of studies have not found any link between use of inhaled steroids and growth delay in children. But the higher the dose used, the greater the risk of possible side effects.

Powerful new classes of corticosteroids can also block the body's reaction to allergens. These drugs can prevent a variety of reactions, from the production of substances known as cytokines to the mustering of white blood cells that will worsen asthma symptoms. Two of the newest corticosteroids are budesonide and fluticasone propionate. Both have been approved by the FDA since 1991. They prevent asthma symptoms, but also reverse inflammation in the airways and reduce the need for oral corticosteroids. Many doctors also prescribe oral corticosteroids to manage severe, persistent asthma.

Cromolyn sodium and nedocromil are other anti-inflammatory drug choices. Used for mild to moderate symptoms, they are often the first drugs prescribed to control symptoms in children and for preventing exercise-induced asthma and attacks caused by allergens.

Bronchodilators. These drugs help dilate the lungs, making breathing easier by relaxing smooth muscles in the airways. Among them are long-acting beta$_2$-agonists such as salmeterol. This inhaled medication can last more than 12 hours, but because it often causes racing heartbeats, may produce muscle tremors and takes time to act, it is not used to treat sudden, severe asthma attacks.

Another option is sustained-released theophylline. Capable of controlling mild to moderate symptoms, theophylline is reserved for use with other medications and is best for preventing night-time asthma symptoms.

Leukotriene modifiers. This new class of drugs blocks the release of chemical compounds found in white blood cells called leukotrienes and helps prevent inflammation, swelling and the tightening of muscles wrapped around the outside of the airways. Sold as Zafirlukast and Zileuton, these tablets are also used for long-range control and prevention of asthma attacks in patients 12 years and older. Their advantage is that "no specific adverse effects have been reported to date," according to the latest government treatment guidelines. But there have been some hints of elevated liver enzymes in a few patients, and the drugs lose their effectiveness if they are taken with zocusia.

Despite a wide range of medications for treating asthma, experts worry about the widening gap between the rich and poor in the use of these powerful new drugs. Allen Togias, associate professor of medicine at Johns Hopkins Medical Institutions in Baltimore, and his colleagues studied 183 teenage asthma patients and found significant differences in asthma drug use that was unrelated to severity of symptoms, but tied to income.

The study found that inhaled corticosteroids, one of the mainstays of asthma treatment, was prescribed for 100 percent of patients in the highest income group, but only 50 percent of those with the lowest family incomes. ■

Kinds of Asthma	SYMPTOMS	LUNG FUNCTION	LONG-TERM CONTROL	QUICK RELIEF
MILD INTERMITTENT	■ Bouts of wheezing, coughing, chest tightness occur twice a week or less. ■ Nighttime breathing problems occur less than twice a month. ■ Often associated with exercise. ■ Normal lung function between attacks. ■ Few severe attacks.	80 percent or more of normal. The readings vary less than 20 percent.	No daily medication needed.	Short-acting inhaled medications, such as albuterol. If these medicines are needed more than two times a week, long-term therapy should be considered.
MILD PERSISTENT	■ Bouts of wheezing, coughing, chest tightness more than twice a week but less than once a day. ■ Nighttime breathing problems occur more than twice a month. ■ Severe attacks may affect activity.	80 percent or more of normal, but the readings vary 20 to 30 percent.	Low daily doses of inhaled corticosteroids, such as budesonide, or cromolyn. Oral doses of a drug such as sustained-release theophylline are another alternative.	Short-acting inhaled medications, such as albuterol. Use of these medicines daily may indicate the need for additional long-term therapy.
MODERATE PERSISTENT	■ Bouts of wheezing, coughing, chest tightness occur daily. ■ Nighttime breathing problems occur more than once a week. ■ Daily use of short-acting inhaled medications, such as albuterol, is needed. ■ Severe attacks may affect activity and may come two or more times a week.	Less than 80 percent but greater than 60 percent of normal. The readings can vary by 30 percent.	Daily medications should be either a medium dose of an anti-inflammatory inhaled corticosteroid, such as budesonide, or a smaller dose of the corticosteroid and a long-acting drug such as salmeterol or theophylline.	Inhaled drugs such as albuterol, but use of such drugs daily may indicate the need for additional long-term therapy.
SEVERE PERSISTENT	■ Continual wheezing, coughing and breathing difficulties and frequent nighttime breathing problems. ■ Limited physical activity because of breathing problems. ■ Frequent serious attacks.	60 percent or less of normal, with readings varying more than 30 percent.	Daily medications are high doses of an inhaled anti-inflammatory corticosteroid, such as budesonide; long-acting drugs, such as salmeterol, to dilate the lung passages; and oral doses of corticosteroid tablets or syrup.	Short-acting inhaled drug such as albuterol. Daily use of such inhaled drugs indicates a need for more long-term therapy.

NOTE: The characteristics in this chart are general and may overlap because asthma is highly variable. Patients at any level can have mild, moderate or severe attacks. An individual patient's classification may change over time.
SOURCE: National Heart, Lung and Blood Institute

ASTHMA, *From Page 14*

woman of the NHLBI panel that drafted the new guidelines. "It puts the patient back in the driver's seat."

The Lloyd family understands that. "I'm so much smarter today than I was at the very beginning when [the kids] were diagnosed, which actually is what keeps them out of the hospital," said Kathy Lloyd.

The Lloyds have no pets because their children are allergic to animal dander, and they work hard to keep dust mites away by encasing the children's mattresses and pillows in plastic. When pollen counts begin to rise in the spring, Kathy Lloyd vacuums more often and washes the curtains and linens more frequently, especially for Michael and Cory.

The boys used to take allergy shots to reduce their sensitivity to a variety of irritants, including pollen and molds. Doctors reasoned that if they were less sensitive to the allergens, they would have fewer asthma attacks. Their attacks have been under better control since the family moved from Hawaii to suburban Philadelphia.

Many physicians recommend such shots, called immunotherapy, as a preventive for asthma patients, but the practice has raised some concerns.

Johns Hopkins University researchers reported in January that they had found the therapy to be of little value in children with the most severe asthma. But allergy and asthma experts caution that the findings apply only to a select group of young asthma patients whose symptoms were exquisitely controlled by high doses of medicine, frequent doctor visits and removal of nearly every possible allergen from the home, including pets.

"If you do really good intensive medical therapy, you can get people under good control [without allergy shots]," said Martha White, of the Washington Hospital Center's Institute of Asthma and Allergy in the District. "In that case, immunotherapy probably doesn't add that much, but that is not generally the real world."

Some people with asthma also need to avoid the use of certain medications and foods. The guidelines recommend that people with asthma avoid the use of beta blocker drugs, which can sometimes trigger an asthma attack, and eliminate any sulfite-containing foods, such as wine, to which they are sensitive.

The new guidelines also strongly recommend that all patients have a written treatment plan and emergency instructions from their physicians for the times when a severe attack occurs. Written treatment plans carefully spell out what medications should be taken daily, which allergens should be avoided and what to do in case of a severe asthma attack.

In addition, it is important for patients to regularly check their lung capacity by exhaling into a simple device called a peak expiratory flow (PEF) meter, according to the guidelines. Over the course of several weeks, patients can determine what is their normal air capacity, and then when they get low readings during regular monitoring, they will know when to begin taking medications. This allows some patients to begin therapy well before symptoms become serious.

At the Finkel household in Potomac, peak flow measurements are as much a part of daily life as eating and brushing teeth. Adam, 10, his two brothers, Lonnie, 8, and Jared, 4, as well as their father Paul, measure their lung function together at breakfast before the children go to school.

"I record the readings and then pretty much determine what medicines they need to have that day," said Aimee Finkel, the boys' mother. "At night, we take peak flow measurements, take medicine, read books and go to bed."

Peak flow readings below 50 percent of normal suggest "severe exacerbation" of asthma, the guidelines note. This drop in lung function is often accompanied by the standard signs of wheezing, coughing, breathlessness and chest tightness.

The standard treatment is to inhale short-acting drugs called beta agonists. If lung function does not improve, repeated treatment can be given and patients are often told to add an oral dose of powerful corticosteroids, which can reduce the inflammation. Should this not control the attack, then patients are advised to seek medical care.

Carefully planning treatment for preventing asthma and for controlling severe attacks takes time but is worth the effort, according to experts, patients and parents.

And at the first sign of a cough, wheezing, a cold or even snoring, she takes her children to the doctor. "I don't wait three or four days until they have an attack," she said. "I would rather take them to the doctor than have to rush them to the hospital emergency room later."

Vigilance and persistence pay off. "When you watch my family play sports, no would even guess that my kids have asthma," said Aimee Finkel. "The point is that if you accept that you have asthma and if you do the right things to control it, you can live a very normal life." ■

More information is available about asthma from:

- **American Academy of Allergy, Asthma and Immunology,** 611 East Wells St., Milwaukee, WI 53202. Phone: 414-272-6071. Web site: http:\\www.aaai.org\
- **American College of Allergy, Asthma & Immunology,** 85 West Algonquin Rd., Suite 550, Arlington Heights, IL 60005. Phone 847-427-1200. Web site: http:\\allergy.mcg.edu
- **Allergy and Asthma Network/Mothers of Asthmatics,** 3554 Chain Bridge Rd., Suite 200, Fairfax, VA 22030-2709. Phone: 703-385-4403. Web site: http:\\www.podi.com/health\aanma\
- **National Asthma Education and Prevention Program, National Heart, Lung and Blood Institute Information Center,** P.O. Box 30105, Bethesda, MD 20824-0105. Web site: http:\\www.nhlbi.nih.gov\nhlbi\nhlbi.htm

Dr. MUNZER. I haven't read the article, there. I have it sitting and waiting. Because I'm sure I'm going to get comments from my patients about it, as invariably happens when there's something in the newspaper. But we have not said that air pollution, as such, has caused asthma. There are many different causes for asthma. And a lot more research is needed to find out exactly what those causes are. One of the causes that we do know about, for example, is maternal smoking. That has definitely been implicated as being a causal factor in the development of asthma. But there is no question whatsoever that both indoor pollution and outdoor pollution can aggravate and bring on attacks of asthma in people who have the condition.

Mr. MCINTOSH. I want to get to Dr. Grande's point in a second. Just looking at the subset of the population that are asthma sufferers, couldn't we do a lot more with $6 to $8 billion by spending it on research to detail those causes and perhaps even paying for the medicine that they need to alleviate the symptoms at this point?

Dr. MUNZER. I think we need a lot more money invested in finding out what the causes of asthma are. And I think we need to do both. We also need to tackle the problem of air pollution, which doesn't only affect people with asthma, but healthy populations. And it also affects people with chronic obstructive lung disease. And in many cases we found out—for example, especially in the case of particulates—that the people who are most likely to die from the effects of particulate pollution are people with heart disease.

Mr. MCINTOSH. And so there are other collateral causes in addition to the particulates? Is that what I understand you're saying?

Dr. MUNZER. It appears that particulate pollution is maybe the straw that breaks that camel's back, when you have a person whose system is compromised by heart disease.

Mr. MCINTOSH. Again, getting back to this question of how we, as a society, would spend $6 to $8 billion, I'm very skeptical that the best use of those resources is one that provides very limited benefit. I mean, EPA's own estimate is less than 1 percent of the population with asthma would benefit from it. Whereas you might be able to directly benefit the entire population. Or, perhaps, as you're pointing out, benefit other people—people who suffer from heart disease and other things by spending it on research in that area.

Dr. MUNZER. But asthma is a very common disease. It affects from 5 to 10 percent of the population. It's also a disease that's on the increase. In the last 10 years, we've seen a 48 percent increase in the incidence of asthma. So, yes, it is very important that we find the underlying cause, that we try to find a cure for asthma. But it is also very important that we help people who have asthma today to breathe better.

Mr. MCINTOSH. Thank you. I'll have some more questions. My time is up. Mr. Sanders.

Mr. SANDERS. Thank you very much, Mr. Chairman. Let me begin by directing some questions—Dr. Grande? Is that how you pronounce your name?

Dr. GRANDE. Yes, sir.

Mr. SANDERS. And maybe to Ms. Kline, as well. Because both of you raised an interesting point. Ms. Kline described for us the horrendous working conditions—or educational circumstances that her kids are forced to operate under—a school system clearly inadequate. And Dr. Grande appropriately pointed out that we are underfunding many other areas of health care, which I certainly agree with. He talked about trauma, cancer research, heart disease, and so forth and so on.

What I find a little bit incongruous, though—and let me start with you, Dr. Grande—is while you're here in a sense saying, "We have limited resources. Why are we doing this rather than that?" And I'm wondering, would you give that testimony, perhaps—and please—before the Armed Forces Committee, which is proposing to spend $1.5 billion each for 20 B–2 bombers that many people think we don't need. Would you give that same testimony in terms of those committees dealing with corporate welfare, where we're providing $125 billion a year in tax breaks and subsidies to large corporations?

In other words, what you're saying is we have limited priorities. I agree. But I find it strange that you're arguing against clean air rather than against excessive military spending and tax breaks for the wealthy. Would you want to comment on that?

Dr. GRANDE. Sure. I just want to clarify my position. I'm not arguing against clean air. I'm arguing against the decisionmaking process where you're allocating public funding to clean air without doing a thorough review of competing priorities for those fundings. Now, your question about the B–2 bombers—if it was placed in the same context, my answer would be yes. I would give the same testimony.

Mr. SANDERS. OK.

Dr. GRANDE. I think it would be fairly naive of me to assume that we're playing some type of zero sum game here, that money that doesn't go to clean air now is going to go to trauma. I don't think that that's true. And I'm not here talking about trauma or about clean air. I'm talking about public health priorities. And I haven't seen anything nor am I convinced that there's any correct thinking in that regard yet.

Mr. SANDERS. I'm just suggesting that in a certain way we are talking about zero sum. We have a budget, and we make decisions. And the Congress will vote to spend $100 billion a year defending Europe and Asia against a non-existent enemy or we will put the money into trauma care, research for cancer, research for heart disease. Those are decisions that we make. And I just find it interesting that what you're saying is, you're deciding priorities between cleaning up our air and trauma. And I would suggest that we should broaden that debate over our national priorities.

Let me ask Dr. Munzer a question, if I might. Dr. Munzer, how widespread of a problem is asthma in the United States today? And does ozone trigger asthma attacks? Is there any scientific dispute over whether ozone triggers asthma attacks?

Dr. MUNZER. Asthma affects about 5 to 10 percent of the U.S. population. And over the last 10 years, there has been an approximately 48 percent increase in incidence of asthma. There is no question but that ozone pollution does trigger asthma attacks.

Mr. SANDERS. OK. Some have argued that revising the ozone standard is not that important from a public health perspective because of the relatively small amount of hospital admissions attributable to asthma. Is the number of hospital admissions the best indicator for the magnitude of the public health threat that ozone presents?

Dr. MUNZER. Emergency room admissions really only represent the tip of the iceberg when it comes to the cost of asthma. Most patients who develop acute asthma attacks do not end up in emergency rooms. But that is the most measurable thing we have available. And that's why we cited the study about emergency room visits. But we should understand that that really only represents the tip of the iceberg when we're talking about the health effects of ozone on people with asthma.

Mr. SANDERS. OK. I will pass at this point.

Mr. MCINTOSH. Thank you, Mr. Sanders. Mr. Waxman.

Mr. WAXMAN. Thank you very much, Mr. Chairman. Dr. Munzer, you just made a very clear and unequivocal statement, and I want to underscore it. You're the only scientist on this panel that deals with asthma and lung problems, and you're the only physician that deals with patients with those kinds of problems. Are you saying unequivocally that ozone and particulates in the air cause an increased problem with those who have asthma?

Dr. MUNZER. Ozone is a very powerful irritant to the respiratory tract. We've known that. And ozone causes, as part of its response, a narrowing or spasm of the air passages, inflammation of the air passages, which translates into the very basic mechanisms of asthma. So, yes. There is no question whatsoever that ozone causes asthma attacks and that it also interferes with the lungs' defense mechanisms against other affecting agents such as bacteria and viruses, because it interferes with the function of the alveolar macrophage, the scavenger cells that keep our lungs clear.

Mr. WAXMAN. Mr. Chairman, the time should be started from the beginning. Now, does particulate air pollution trigger asthma attacks?

Dr. MUNZER. Particulate air pollution has many of the same effects that ozone does. There are only so many ways in which the lung can react. When the lung is injured it reacts by developing spasm and inflammation of the air passages. And that's what we mean by asthma. And there are many offending agents that can cause that.

Mr. WAXMAN. Are these asthma attacks triggered by ozone and particulate air pollution at levels below the current standards?

Dr. MUNZER. The medical literature now is unequivocal about the fact that the current standards are no longer protective for people with asthma, and that, indeed, asthma attacks occur at levels below the current standard.

Mr. WAXMAN. I was surprised by Ms. Kline's statement. She said that she's not convinced that ozone is hurting her child with asthma. She's more concerned about plaster in the building. Yet Dr. Munzer told us that the scientific literature is clear on this subject. Do you still doubt the science of it?

Ms. KLINE. What I meant was that I don't have a question about whether or not ozone is bad for your lungs. My question is whether

it's worse than some of the other triggers and some of the other problems that my children have. It's not that ozone is a good thing. It's that ozone is not as important, perhaps, as some of the—and I'm not even saying that I know that. I'm just saying——

Mr. WAXMAN. Yes. You don't doubt, then, that ozone and particulate pollution can trigger asthma attacks?

Ms. KLINE. I believe that it can.

Mr. WAXMAN. OK. Now, does anybody on the panel disagree with that?

Dr. GRANDE. Well, I just wanted to respond to one of your comments. I——

Mr. WAXMAN. No. I'm asking you the question. Do you disagree with the statement that air pollution can trigger asthma attacks?

Dr. GRANDE. I believe that air pollution can trigger asthma attacks. I also agree that the data that I've reviewed—and spoken to other experts—that addressing different components of that argument are equivocal.

Mr. WAXMAN. Yes. Dr. Munzer, do you have any comment on the science of this?

Dr. MUNZER. I think the science has been reviewed by both the Environmental Protection Agency, its panel of outside scientists, it has been reviewed by scientists in the American Thoracic Society, the medical section of the American Lung Association. And I believe that there is a very broad consensus on this issue, as broad a consensus as you will find among scientists, that air pollution, ozone, fine particulates do trigger asthma attacks.

Mr. WAXMAN. There's a statement from the American Lung Association of a study that said emergency room visits for asthma occurred 28 percent more frequently when ozone parts were about 60 parts per billion, a level about one-half the current standard. When they were below 60 parts per billion, the researchers concluded that ozone adversely affects asthmatics well below the current U.S. standard.

What does it mean if a kid has an asthma attack? I don't have asthma. I don't have a child that has asthma. But I do know people who have had it. It means that they can't catch their breath. If we're talking about increased emergency room visits, those are the ones who show up at the emergency rooms. I know kids who have asthma attacks that never show up at emergency.

Dr. MUNZER. Asthma is really a form of suffocation. It's like breathing through a very fine straw. It's extremely painful. It's not something to be minimized as a health effect. It's a very serious, very painful condition. It can come on very quickly. And it can, unfortunately, at times, be fatal. And, in fact, the death rate from asthma has also gone up very markedly in the last 10 years.

Mr. WAXMAN. Dr. Munzer, the problem of asthma attacks triggered by air pollution, are they common or uncommon?

Dr. MUNZER. Asthma is a very common condition. And, unfortunately, air pollution is still a very common problem in many areas of the country. And so I believe that air pollution is really a major factor in precipitating asthma attacks.

Mr. WAXMAN. We're talking about asthma, but air pollution also affects people with heart disease and other ailments, as well.

Dr. MUNZER. Air pollution certainly has an effect on people with chronic bronchitis and emphysema. It has an effect on children, whose lungs are not yet fully developed and who really need their defenses against bacteria and viruses, and can't have them interfered with. And that's why they develop deep chest infections when they're exposed to air pollution. And the same thing is true for the elderly. Their defense mechanisms are on the wane. And they, also, are particularly vulnerable to the effects of air pollution.

Mr. WAXMAN. Now, Ms. Kline talked about her experience with her child. Would a parent know if a child's asthma attack is being triggered by ozone levels that are maybe too high?

Dr. MUNZER. I think that would be very difficult for an individual parent to know. I think that's precisely where Government comes in. We, as individuals, cannot measure levels of ozone in the atmosphere. But, certainly——

Mr. WAXMAN. Let me interrupt you, because I see the yellow light. And before my time is over—the chairman suggested maybe we ought to take money and spend it on research on asthma and not on air pollution control. Maybe we ought to spend it on medications for people with asthma and not air pollution control. But that doesn't make any sense to me if we already know that air pollution is such an enormous problem that we have to go buy medicines to treat people. If we can avoid the problem and prevent some of these asthma attacks by reducing air pollution that we breathe and have such a devastating impact on people with asthma. What's your comment about that?

Dr. MUNZER. Well, it's been suggested that people with asthma who are exposed to pollution could just take more medication. But these medications do have very serious side effects. There have been several articles in the last few years of mortality attributable to the excessive use of bronchodilators. So there is a real price to pay. And, certainly, prevention remains the best medicine.

Mr. MCINTOSH. Thank you, doctor. I have some additional questions on that. We're going to flip back and forth. Let me ask Dr. Munzer a question. What I was, in fact, indicating was there's an evidence put forward in the Washington Post article and other places that the greater cause of asthma does not come from ambient air pollution but other causes. Ms. Kline mentioned natural causes—camp, also causes in the home, dust and mites—and if we were going to allocate $8 billion of social resources to benefit the total universe of asthma sufferers, which I understand the American Lung Association indicates is about 13 million.

The lower range of that 5 to 10 percent you mentioned, that you could benefit all of those people by providing some assistance to them in either determining ways they could be cured from asthma or providing the medicines they need to treat asthma that is not caused by air pollution, and that, rather than picking out—I guess the EPA's number 15,000 individuals, which is less then 1 percent of that entire universe—then why wouldn't we want to benefit a greater number of people, perhaps, and imposing significantly less trauma to society as Mr. Congress was mentioning?

Dr. MUNZER. The American Lung Association, certainly, for a long time, has favored more research dollars for asthma. I think we do need to know the causes for asthma. And we have to invest

more in asthma as a disease. We have also very strongly supported access of health care to people so that they can treat their asthma properly. Asthma medications are extremely expensive. One of those little metered dose inhalers costs about $60. And some patients take three or four of them.

Mr. MCINTOSH. Three or four inhalers over what timeframe?

Dr. MUNZER. Over a month. Three or four at a time. And they last about a month.

Mr. MCINTOSH. Yes.

Dr. MUNZER. So, we have an immediate cost that is extremely high. Plus some of these medications now turn out to have long-term side effects. There is no question, therefore, that in addition to treating asthma, in addition to doing research in asthma, we also need to try to prevent individual asthma attacks. And one very important strategy in that battle is to control air pollution. Air pollution is a major factor, not just in a very small number of people with asthma, but in many people with asthma.

Mr. MCINTOSH. Now, one of the things that I've heard from other farmers—and Mr. Wade, you might want to address this—is that it would be virtually impossible for most agricultural sectors in the United States to comply with the proposed EPA standard and still be able to till the ground. You mentioned problems that you face in your particular sector of disposing of waste, storage of fertilizer and other chemicals. Do you have any estimates of the magnitude in the agriculture sector of that proposed change?

Mr. WADE. Well, to begin with, the PM2.5 problem isn't a measured problem, at least in agriculture. It's a problem that's calculated based on PM10 measurements. And it's extrapolated from that data. So the $24 million study that I alluded to in my comments that's being conducted at Crocker Nuclear Lab at UC Davis is looking at not only PM10, but PM2.5. And what we're finding is it's a much smaller issue for agriculture. It's more of an urban issue. But it's one that's going to be pervasive and one that is nationwide. So I believe that everybody will be affected by it. But we are unsure of the extent of it at this point.

Mr. MCINTOSH. Now, one hypothetical solution to making sure that there wouldn't be these PM2.5 particles in the air would be to eliminate agriculture production, because then you wouldn't have that result from the disking in the spring or in the fall during dry periods. Would that be worth the tradeoff?

Mr. WADE. Well, it depends on what consumers want to pay for a food supply and what they want in terms of food safety, whether or not we want an agriculture industry in the United States.

Mr. MCINTOSH. And could you explain why EPA's proposal without finishing the study on PM2.5 would cause problems legally?

Mr. WADE. At one time the best science we had said that the earth was flat. And what we're trying to do is determine best what the sources of PM10 and PM2.5 are. And until that data is available, it's going to be impossible to develop a control measure or a solution that's going to be equitable for the public and equitable for business in the country. When I'm making decisions on my farm, when I need to determine whether or not I have an insect pest that we have to take care of, we don't go out and arbitrarily spray because there might be a problem.

We check it out. We put pheromone traps out to determine what the problem is. And we solve that particular problem. We're not doing that in this case. We've got a supposition that there might be a problem. And we've got a blanket solution without determining whether or not it's going to be helpful.

Mr. MCINTOSH. Thank you, Mr. Wade. Mr. Kucinich, do you have any questions for the panel?

Mr. KUCINICH. Yes. I do. Thank you very much.

Mr. WAXMAN. Would the gentleman just yield for a unanimous consent request?

Mr. KUCINICH. Yes.

Mr. WAXMAN. I want to put in the record an excerpt from CASAC's closure letters on the fine particulate matter standard. And it says, "With the incorporation of our suggested changes the revised criteria document will be very comprehensive and will provide an adequate scientific basis for regulatory decisions on particulate matter based on available information. There was also consensus that a new PM2.5 NAAQS be established with 19 panel members endorsing the concept of a 24-hour and/or an annual PM2.5 NAAQS." Thank you.

[The information referred to follows:]

Excerpts From CASAC's Closure letters on the Fine Particulate Matter Standard

"With the incorporation of our suggested changes, the revised Criteria Document will be very comprehensive and will provide an adequate scientific basis for regulatory decisions on particulate matter based on available information."[1]

"There was also consensus that a new PM2.5 NAAQS be established, with nineteei Panel members endorsing the concept of a 24-hour and/or an annual PM2.5 NAAQS."[2]

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[1]Letter from George T. Wolff to Carol M. Browner, Closure by the Clean Air Scientific Advisory Committee (CASAC) on the draft Air Quality Criteria for Particulate Matter, March 15, 1996, p.3.

[2]Letter from George T. Wolff to Carol M. Browner, Closure by the Clean Air Scientific Advisory Committee (CASAC) on the Staff Paper for Particulate Matter, June 13, 1996, p.2.

Mr. KUCINICH. Thank you very much, Mr. Chairman and members of the panel. I have a question for—is it Mrs. Kline? Ms. Kline.

Ms. KLINE. Yes.

Mr. KUCINICH. OK. Mrs. Kline, first of all I want to say that you're to be commended for working with the children in the fourth grade. I think teaching is very important, particularly in the inner city. As someone who grew up in the inner city, I know how influential teachers can be. And, also, as someone who grew up in the inner city, and with all of the economic problems that come from growing up in a big family in the inner city, I was surprised to see from your testimony that your students, even though the poverty rate is 86 percent, have fireplaces and lawns. Because in my neighborhood, we didn't have fireplaces and we didn't have lawns. And some of us didn't even have cars. And I wonder how those choices were brought before the children. Because in some poor neighborhoods they don't have those kinds of choices.

Ms. KLINE. That's right. And in my neighborhood, 86 percent is good. There are neighborhoods in Philadelphia that are 99 percent poverty level. My neighborhood is a neighborhood that used to be, in its day, a rather well-to-do neighborhood, so that some of the homes in the neighborhood are quite lovely. But the value of them is not there any more. Some of them have three stories. Some of them have five bedrooms. But the value of the home is not there. Now, currently, we're in the midst of a unit on ecology. So, my students have studied a lot about different biosystems of the world. And they know something about pollution. And they know something about how to solve problems.

Mr. KUCINICH. Do your children ever complain about pollution?

Ms. KLINE. No. They really don't. Because this is their life. So they don't really know that there's anything to——

Mr. KUCINICH. Did you ever discuss with them the differences that can occur in some places where children live in environments which are polluted?

Ms. KLINE. Yes. Well, we've discussed things like the deforestation of the rain forest. And we've discussed some different—and they've taken trips out of the city. And they see what other children have in their schools. And when I asked last year for the children to bring in just trash that they find in the neighborhood—because we were going to make a sculpture out of it—I had wine bottles brought in and beer cans brought in. And, so, that's the neighborhood.

Mr. KUCINICH. OK. I have a question for Dr. Grande. You're the executive director of this ITACCS. Is that a full-time position, doctor?

Dr. GRANDE. No. It's not. It's a volunteer position.

Mr. KUCINICH. How often do you meet? How often does your association meet?

Dr. GRANDE. Well, around the world—we're an international association—I would say at least on average one to two times per month somewhere in the world.

Mr. KUCINICH. But, I mean, how often have you met in the United States? When is the last time you had a meeting in the United States?

Dr. GRANDE. About 2 weeks ago. And we have one about 4 weeks from now in Baltimore.

Mr. KUCINICH. And when you meet with this voluntary position that you have, did you have kind of a roundtable discussion among all your peers? Is your testimony representing—is it the product of discussions among all your peers?

Dr. GRANDE. Well, the way the society works is we have over 1,000 members. It's governed by a board of directors, which is duly elected. I was elected as executive director. Decisions are taken at board level. We're advised by committees or subcommittees, much like you are. And the consensus on this issue is one that has been developed, I think, over the last 9 months or so.

Mr. KUCINICH. And when you say the consensus was developed, who was involved? You have 1,000 members. How many people made the decision about your testimony?

Dr. GRANDE. The board of directors and our advisors that we have deemed appropriate in terms of media advice, political advice, much, I suppose, like the American Lung Association.

Mr. KUCINICH. So, what's the address of your organization?

Dr. GRANDE. The address is P.O. Box 4826, Baltimore, MD 21210.

Mr. KUCINICH. OK. And can you tell me if the job that you have—do you see air pollution as a traumatic injury at any time?

Dr. GRANDE. It can be described that way. Yes.

Mr. KUCINICH. And if it is described as a traumatic injury, would you say that a reduction in air pollution could reduce traumatic injuries?

Dr. GRANDE. I wouldn't make that statement.

Mr. KUCINICH. Could a reduction in air pollution reduce traumatic injuries to the lungs, the incidents?

Dr. GRANDE. Well, I think the evidence that Dr. Munzer brought out is that we know that air pollution is a risk factor for not only developing the acute exacerbation of asthma. How important it ranks as another issue, we don't know. I think he stated that.

Mr. KUCINICH. So, do you support his testimony, then, with respect to the problems associated with air pollution and the impact on the lungs? Do you agree with his——

Dr. GRANDE. Not completely. No.

Mr. KUCINICH. What do you disagree with?

Dr. GRANDE. Well, I've discussed this issue, as I've had to in my role, to try to consolidate the testimony which was presented here today. And I've spoken with experts in allergy and immunology who are investigating specifically the issue of particulate matter particularly with a view toward the differences as the chairperson brought out between external and internal PM. And the thinking now that I've heard is that ozone is not an issue, and that particulate matter, nobody really knows where it is, and that if it's anywhere, it's probably particulate matter is an issue within the interior rather than the external area. And these proposed regulations, I understand, do not impact that differential.

Mr. KUCINICH. But as far as you're concerned, if it does get that bad, the victims, if you could call it that, could use an inhaler one extra time on the worst day and that would help them? Is that right?

Dr. GRANDE. Well, no. I disagree. And I want to come back to what some——

Mr. KUCINICH. That's in your testimony.

Dr. GRANDE. What?

Mr. KUCINICH. Your testimony is, "According to the study authors, this increase in asthma exacerbation equates to one extra use of an inhaler among one in seven severe asthmatics on the worst pollution day. An important health problem? Possibly. But before we commit our scarce resources, wouldn't it be useful to know exactly where this health effect ranks among other public health priorities."

You're citing something. Do you believe this or don't you?

Dr. GRANDE. I believe that that's what those authors said in their statement. And I used it as an example to bring up the equivocalness of this entire discussion.

Mr. KUCINICH. And would you prescribe an extra inhalation of a bronchodilator as a way of solving air pollution as opposed to lower particulate levels and lower ozone levels?

Dr. GRANDE. Well, I think that Dr. Munzer addressed that. I think that patients that have inhalers know—ought to know it's a logical thing. If you have asthma and you're having difficulty breathing, and you have a methodose inhaler handy, use it. That's not a big issue. I take care of trauma patients. And as opposed to the distinction made previously, I take care of acute emergency asthma patients seen in the emergency department and in the critical care department.

If I have two patients coming through the door—an acute asthma patient, pediatric, and an acute pediatric trauma patient—I can say almost 100 percent I can reverse that asthmatic situation. I can't say that in the case of the trauma case, even though the resources exist which would allow me to do that if I had it.

Mr. KUCINICH. One final question. If you were convinced that improved standards for PM as well as for ozone could reduce the number of emergency room visits by children and others with chronic obstructive pulmonary disease or asthma, would you then support those standards?

Dr. GRANDE. No. I think that they have to be presented within the context of other priorities, and there has to be some rational decisionmaking by those who are elected to make those decisions in terms of how those moneys should be spent.

Mr. MCINTOSH. Thank you very much. I will not ask any more questions now, but ask the panel if perhaps we could send you some in writing and you could provide additional answers to those, so that we could move on to the next panel. Mr. Sanders, a couple more very brief questions.

Mr. SANDERS. Yes. I didn't want Mr. Wade to feel left out and ignored here. So I have a question for you. Mr. Wade, it is my understanding that it is a coal-burning plant in Ohio that emits more NOx—that's nitrogen oxide, a precursor to ozone—than all of the utility plants in New Jersey and five times the annual emission of the District of Columbia. And those NOx ride on westerly winds to the Northeast, where folks in New York and Vermont and Massachusetts breathe that stuff.

Now, do you think it is fair to the families in New England or New York who have to spend money on medical bills or have to take care of sick kids, that the Federal Government not deal with that and that that coal plant continue to pollute?

Mr. WADE. I have to refer to comments by Secretary Browner in her testimony when she used words like "may" and "might" that cause a problem from PM10 and ozone pollutants. Until we know that they do and they will, I don't think we can effectively say that this regulation is going to be helpful.

Mr. SANDERS. So you think that, at this particular point, we should ignore that problem?

Mr. WADE. No. I don't believe we should ignore it at all. I think we should study it, and I think we should know what to do before we act.

Mr. SANDERS. I see. OK. Thank you.

Mr. MCINTOSH. Thank you very much. Let me say thank you to all the members of the panel. I believe greatly on input from citizens of different backgrounds and experiences. Your contribution today has been very good. I think the admonition to use caution before we act, and make sure we know the problem we're addressing, and using our resources in the best possible manner, is a very good one. I will take that to my colleagues in Congress. Thank you all for participating today. We will be sending some additional questions.

Let me now call forward our second panel, which are several officials of government outside of the Federal Government. One of the goals that we've had in Congress—at least as long as I've been here—is to make sure that we are mindful of elective officials and their duties in the State and local governments. I appreciate each of you coming here today from various regions of the country as well as representing different levels of Government and different parties in the political system, to participate in this hearing and to give us your input.

As I mentioned for the first panel, it is the policy of the full committee to ask all of the witnesses before our subcommittee to be sworn in, in order to make sure their testimony is under oath. And, so, with all due respect, I would ask each of you if you could please rise and join in taking that oath.

[Witnesses sworn.]

Mr. MCINTOSH. Thank you very much. Let the record show that each of the witnesses answered in the affirmative. Our first witness today is a leader from the Midwest, somebody that I've been honored to work with when I was at the Council on Regulatory Issues, the Hon. George Voinovich, Governor of Ohio. Thank you very much. I understand fully how busy your schedule is. I appreciate your willingness to come and share with us your views on these proposed standards. Governor Voinovich.

STATEMENT OF GEORGE VOINOVICH, GOVERNOR OF OHIO

Governor VOINOVICH. Thank you, Mr. Chairman, Congressman Sanders and members of the subcommittee. Thank you for the opportunity to provide comment on the Environmental Protection Agency's proposed changes in the national ambient air quality standards for ozone and particulate matter. I'm here today as the

former mayor of the city of Cleveland and Governor of Ohio. I care deeply about our environment. I was the lead sponsor of the legislation that created the Ohio Environmental Protection Agency back when I served in the legislature, and fought to end the drilling for gas and oil in Lake Erie.

And I strongly support Federal, State and local programs to protect the environment and the health of our citizens. And I'm very proud. Over the last 20 years Ohio has made significant strides in cleaning our air. Ozone has dropped by 25 percent overall, and by as much as 50 percent in our urban areas Columbus, Youngstown, Canton, Cleveland, Akron, Toledo and Dayton have been brought into attainment. Cincinnati is the only area in the State not in attainment. And we're just that close to attainment.

However, the proposed standards threaten to undo all the hard work and sacrifice made by our constituents to bring their communities into attainment. Right now, only 4 of our 88 counties are not in attainment for ozone. And two for particulate matter. If these new rules go into effect, over half of Ohio counties will be in non-attainment.

I oppose these proposed standards for several reasons. First, according to the EPA's own estimates, the cost for implementing the proposed standard for ozone exceeds the benefits. EPA acknowledges that benefits from tightening the ozone standard may be as low as zero. And the President's own Council of Economic Advisors predicted that the benefits would be small while the cost of reaching full attainment could total $60 billion.

Second, the costs of the proposed standard have been vastly underestimated. Although EPA estimates the annual compliance cost for the ozone standard would be $600 million nationwide, we project the annual capital expenditures for Ohio utilities alone will exceed $730 million. These costs are estimated to boost utility rates more than 17 percent in some areas, with an average increase of about 7 percent.

Third, the projected benefits of the proposed ozone standard appear minimal. My own health director reports that Ohio doctors will see no perceptible decrease in hospital visits as a result of these proposals. And as the subcommittee is no doubt aware, EPA recently has backed off even their own modest benefit projections. EPA now admits that the current standards are providing greater health protection than originally thought. I respectfully urge the subcommittee to request that EPA provide an updated analysis taking into account new cost and benefit data.

Fourth, with regard to particulate matter, there is no reliable monitoring data and no established monitoring methodology. As a result, EPA can only guess which areas will be non-attainment under the new standards. So, Federal estimates of compliance costs are highly questionable.

And finally, scientists do not fully understand the links between particulate matter and health effects. More information is simply necessary. And I think that the President agrees with that. Because, as you know, in his budget he has asked for a 37-percent increase for research into the potential links between PM exposures and health effects. And I think in that budget message, in the presentation, it said, "To reduce the great uncertainty about

PM's health effects, EPA will continue its effort to identify the mechanisms by which particles affect human health."

This is clearly a case of putting the cart before the horse. I find it hard to believe that anyone in public service has the luxury of throwing billions of dollars at a problem without knowing if it is hitting the right target. Yet that is exactly what EPA is proposing to do. I say, show me the science. Without a significant public health benefit, one must ask, why are we going to impose these job-killing rules. Small businesses and manufacturing jobs in Ohio and across the Nation will be devastated.

America's competitiveness in the global marketplace undoubtedly will suffer from this unnecessary burden as our trading partners benefit from our lack of judgment. A Ford motor facility in Ohio had the following real world example of the impact the proposed standards for particulates will have. And I think, Congressman Kucinich, that this facility is in your district.

The Cleveland Casting Plant currently controls more than 95 percent of the particulate sources. Controls on the remaining stacks would produce very little if any additional reduction. Therefore, should additional reductions be required, there may be no choice but to curtail production from current levels.

Another company in northeast Ohio wants desperately to expand, not just to meet the exploding demand that they have for their product, but also to take care of their current customers. They employ 61 employees at the moment. At the present time they do not know whether they ought to go forward and expand the way they'd like to.

In other words, these proposals are creating a catch–22 for this company. If they do not expand, they risk losing customers and market share. However, if they do expand and new standards are implemented, they risk being out of compliance. EPA's proposals, literally—I think this is important today—are checkmaking job creation in this country. As a former mayor, I'm concerned also about the impact of these proposals on these vulnerable communities. And you'll be hearing from Representative Schoenberg, who I'm sure will speak eloquently to the impact that it's going to have on the city of Chicago.

I would also like to say that I worked with this committee several years ago in terms of dealing with unfunded Federal mandates. Certainly, these proposed rules are a very, very large unfunded mandate. And, also, in my opinion, the way the EPA contemplates adopting the rules violates SBREFA, which is another thing that Congress has done to try and get some sense in some of these initiatives in the environmental area.

I'd like to conclude and point out that almost every major newspaper in Ohio has editorialized against these proposals. And ordinarily, our newspapers in the State are great advocates for a clean and healthy environment. Our largest newspaper, the Cleveland Plain Dealer, said it best. "To oppose the EPA's new rules is not, as some supporters suggest, to favor air pollution, asthma attacks, or premature death. To oppose these rules is to favor solutions to

identifiable problems, expenditures that produce the predicted results, science that stands up to scrutiny, and rulemakers who respect the difference and laws that expect them to do that."

Thank you for this opportunity to appear before your committee.

[The prepared statement of Governor Voinovich follows:]

Governor George V. Voinovich
Testimony on National Ambient Air Quality Standards
Subcommittee on National Economic Growth,
Natural Resources and Regulatory Affairs
House Government Reform and Oversight Committee
April 16, 1997

Chairman McIntosh, Congressman Sanders and members of the Subcommittee, thank you for this opportunity to provide comment on the Environmental Protection Agency's proposed changes in the National Ambient Air Quality Standards for ozone and particulate matter.

I am here today as the former Mayor of Cleveland, the Governor of the State of Ohio and as a public official who cares deeply about the environment. I was the lead sponsor of legislation to create the Ohio Environmental Protection Agency when I served in the legislature, and I fought to end oil and gas drilling in the Lake Erie basin. I strongly support federal, state and local programs to protect the environment and the health of our citizens.

I am very proud that over the last 20 years, Ohio has made significant strides in cleaning our air. Ozone has dropped by 25 percent overall and by as much as 50 percent in some urban areas. Columbus, Youngstown, Canton, Cleveland, Akron, Toledo and Dayton have been brought into attainment, and under current standards the Cincinnati area is close to achieving attainment status.

However, the proposed standards threaten to undo all the hard work and sacrifice made by our constituents to bring their communities into attainment. Right now, only four of our 88 counties are in nonattainment for ozone and two for particulate matter. Under the proposed standards, Ohio would have more new counties falling into nonattainment than any

other state in the nation. Half of Ohio's counties would fail to meet the new standards for ozone or particulate matter.

I oppose these proposed standards for several reasons.

First, according to EPA's own estimates, the costs for implementing the proposed standard for ozone exceed the benefits. EPA acknowledges that benefits from tightening the ozone standard may be as low as zero, and the President's own Council of Economic Advisors predicted that the benefits would be small while the costs of reaching full attainment could total $60 billion.

Second, the costs of the proposed ozone standard have been vastly underestimated. Although EPA estimates the annual compliance costs for the ozone standard would be $600 million nationwide, we project the annual capital expenditures for Ohio utilities alone will exceed $730 million a year. These costs are estimated to boost Ohio utility rates more than 17 percent in some areas, with an average rate increase of 7 percent.

Third, the projected benefits of the proposed ozone standard appear statistically insignificant. EPA originally estimated less than a one percent reduction in hospital admissions for asthma, an estimate that is well within a reasonable margin of error. Moreover, as EPA has acknowledged, many metropolitan areas will not achieve the proposed new standard. If the standard cannot be met, the health benefits claimed by EPA simply will not be realized.

However, as the subcommittee is no doubt aware EPA has backed off even these modest benefit projections. Their study on hospital admissions for asthma in New York City, for example, now estimates just a .01 percent benefit.

In generating recent "technical" recalculations of the benefits of the proposed standards, EPA has admitted that the current standards are providing greater health protection than originally thought. Therefore, the anticipated benefits of implementing the new proposal are much lower. Given the highly dubious results of EPA's original analysis, what would a new, more rigorous cost-benefit analysis show? I respectfully urge the subcommittee to request that EPA provide an updated analysis taking into account new cost and benefit data.

Fourth, with regard to particulate matter (PM), there is little reliable monitoring data and no established monitoring methodology. As a result, EPA cannot predict with any accuracy the cost of compliance with the proposed PM standard. In fact, EPA can only guess which areas will be in non-attainment under the new standard, so federal estimates of compliance costs are highly questionable.

Finally, scientists have not established direct links between particulate matter and health effects. Obviously, we don't want our citizens spending hundreds of millions of dollars to combat the wrong pollutant. More information simply is necessary.

Fortunately, the President seems to agree, and has proposed a 37 percent increase for research into the potential links between PM exposures and health effects. The President's most recent budget proposal says, "To reduce the great uncertainty about PM's health effects, EPA will continue its efforts to identify the mechanisms by which particles affect human health."

This is clearly a case of putting the cart before the horse. I find it hard to believe that anyone in public service has the luxury of throwing billions of dollars at a problem without knowing if it is hitting the right target, yet that is exactly what EPA is proposing to do. EPA should complete the

research and conclusively demonstrate the scientific underpinnings of these proposals before imposing a new standard.

Without a significant public health benefit, one must ask why are we going to impose these job-killing rules? Small businesses and manufacturing jobs in Ohio and across the nation will be devastated. America's competitiveness in the global marketplace undoubtedly will suffer from this unnecessary burden as our trading partners benefit from our lack of judgment.

The Small Business Administration's assessment corroborates this view. They said EPA's proposal "is certainly one of the most expensive regulations, if not the most expensive regulation faced by small businesses in ten or more years." This analysis adds, "Considering the large economic impacts suggested by EPA's own analysis that will unquestionably fall on tens of thousands, if not hundreds of thousands of small businesses, this would be a startling proposition to the small business community."

A Ford Motor Company facility in Ohio had the following real-world example of the impact the proposed standards for particulates will have.

> Cleveland Casting Plant currently controls more than 95 percent of all the particulate sources. Controls on the remaining stacks would produce very little (if any) additional reduction...Therefore, should additional reductions be required, there may be no choice but to curtail production from current levels.

A company in Northeast Ohio wants desperately to expand, not just to meet exploding demand, but also to keep current customers. They have 61 employees at the moment, and could quickly increase to 100. They have lost customers because their current production capacity is inadequate. They have a $3 million backlog of orders.

They already use the most current technology and are in compliance with current EPA standards. However, they cannot move forward because the technology to bring them into compliance with the proposed standards is not available.

In other words, these proposals are creating a Catch-22 for this company. If they do not expand, they risk losing customers and market share. However, if they do expand and the new standards are implemented, they risk being out of compliance. EPA's proposals literally are checkmating job-creation even as we speak.

As a former mayor, I am very concerned about the impact of these proposals on some of our most vulnerable communities -- urban areas. Manufacturing jobs that are critical to the economic viability of our urban centers will be dealt a punishing blow, and our efforts to implement welfare reform and move dependent citizens into jobs will be undermined.

What environmental purpose is served by forcing developers and investment capital to move out of urban centers to develop and pave farmland and wooded areas? The President's efforts to create empowerment zones will be made a cruel hoax by these proposals. This proposal raises the age-old question, does the right hand know what the left hand is doing?

Naturally, I recognize that there are varying regional perspectives on the debate about clean air priorities. Ohio is heavily involved in the Ozone Transport Assessment Group's work to resolve some of those differences. It is my hope that this collaborative, multi-state process can bridge some of these differences in the next several months.

In the meantime, I would like to take this opportunity to point out that Ohio has undertaken considerable efforts and made many sacrifices to clean our air. Under the current standards, we expect our final community -- Cincinnati -- to reach full attainment for ozone later this year.

Ohio industries and businesses have spent more than $5 billion on capital costs since 1972 to control the primary pollutants regulated by the Clean Air Act. Ohio's public utilities have spent $3.7 billion on air pollution controls through 1995, more than the expenditures of utilities in New York, New Hampshire, New Jersey, Vermont, Massachusetts, Maryland, Maine, Delaware, Connecticut and Rhode Island combined.

In addition, at a time when many states have been unwilling or unable to implement emissions testing for automobiles, we have implemented emissions testing in the Cincinnati, Dayton, Cleveland and Akron communities.

Make no mistake, it is an extremely unpopular program among our constituents, as Congressman LaTourette will undoubtedly attest, but we have persisted because of our commitment to protecting our air quality. To those who argue that Ohio must assume vast new burdens, I suggest their state at least make the same level of commitment to clean air that we have made in Ohio.

If Congress and the President permit these ill-conceived rules to go forward, communities across the nation will be forced to adopt these extremely unpopular and burdensome mandates. I worked closely with this committee to pass the Unfunded Mandates Reform Act, and it is clear that these rules are one of the largest unfunded mandates ever.

If we have learned anything in the past several decades, it is that the American public is willing to make sacrifices and pay for real gains in

environmental and public health protection. However, they will not support illusory gains that impose vast new costs and burdens.

Mr. Chairman, these proposals cannot be justified on the basis of either costs or benefits. The costs will be exceedingly high and the benefits are highly doubtful.

Ohio's largest paper, *The Cleveland Plain Dealer*, said it best:

> To oppose the EPA's new rules is not, as some supporters suggest, to favor air pollution, ashtma attacks or premature death. To oppose these rules is to favor solutions to identifiable problems, expenditures that produce the predicted results, science that stands up to scrutiny, rule-makers who respect the difference, and laws that expect them to.

Thank you.

Mr. MCINTOSH. Thank you very much, Governor. I look forward to talking with you more on this. A great quote from your newspaper in Cleveland. Our next witness has traveled to us from—she's the mayor of San Diego, and traveled here from the West Coast to be with us. I truly appreciate that. Let me now introduce Mayor Susan Golding.

STATEMENT OF SUSAN GOLDING, MAYOR OF SAN DIEGO, CA

Ms. GOLDING. Thank you, sir. Mr. Chairman and members of the committee, I appreciate the opportunity to appear before you today and speak about the EPA's proposed standards for ozone and fine particulate matter. As the mayor of one of the largest cities in the country, I'm very much aware and take very seriously the responsibility of protecting the public health. And I strongly believe we have made tremendous progress in cleaning our air, and that we should continue our efforts to make the air cleaner.

I'm aware of my responsibility in that regard, just as I believe the EPA honestly believes they will improve the health of every San Diegan, if the air standards on these two issues are made more stringent. All cities should have cleaner air. However, simply ordering us to clean our air to meet unproven standards without clear implementation plans is not in the best interest of my city, my citizens or any city in this country.

As a basis for my comments, let me give you a little background on my region. We're the sixth largest city in the country, with a population of 1.2 million residents. Our county has approximately 2.2 million residents. Our air quality is monitored and regulated by our local air pollution control board. Unlike most States, California places the responsibility for achieving attainment standards in the hands of individual counties, who then design programs to fit those unique needs.

There is flexibility in doing this, and we find it's far more effective in actually accomplishing goals. Let me assure you we are committed to cleaner air for all our citizens. Our air pollution control board, on which I served as chair, and served for at least 8 years, has been a leader in pursuing programs which have steadily improved our air quality over the last 10 years. As you know, California is known as an environmentally sensitive State, and we have very strict standards ourselves.

In San Diego, the number of days we exceeded the Federal air quality standards dropped from 39 in 1990 to only 2 in 1996. And I should note for the record that those 2 days were directly attributable to wind conditions we call "Santa Anas" which transport air from Los Angeles to San Diego. We already have rigorous control programs in place and they are, in fact, working. We have a compliance division comprising 30 staff members—this is for this region only—who actively followup on citizens' complaints, and who perform regular site visitations. These efforts have produced very measurable, significant and favorable results.

Yet as good as we have become, our air pollution control board estimates that if the EPA's new proposed standards become law, our county could be out of compliance for ozone more than 40 times the first year, and that we might never reach full attainment. Because of the stricter standards we already have in California, and

the types of programs we have implemented to meet those standards, I remain skeptical when the EPA says that by simply further regulating our already highly regulated stationary industries, we can, in fact, attain these new levels, unless, of course, we attain them by putting them out of business.

It just isn't always so. According to the San Diego Air Pollution Control District's annual report, ozone producing emissions from businesses account for less than 15 percent of our region's air quality problems. San Diego's aggressive 20 year air quality program has already reduced emissions from stationary sources through the application of strict emission controls. The emission reduction well is pretty dry. Any further minimal reductions from stationary sources can only come from drilling the well deeper into smaller businesses or industries with small emissions, such as biotech, electronics or agriculture.

I think it is prudent then to ask, what is the cost? The question we would have to ask ourselves as elected officials is, how do we make up this difference? If we're down to 15 percent on traditional sources, where do we turn for further reductions, and what do those further reductions cost, and what is the net benefit or effect? What other priorities would have to be compromised? Would we have to stop sweeping our streets for fear of raising airborne dust?

Would we have to take actions against our citizens as were contemplated in the district north of us—outlawing fireplaces and barbecues as has been suggested in some areas? Would there be a loss of jobs because of costlier equipment mandates which could result in lost health care benefits and financial stability for our citizens. Now, those certainly would be the extremes, but I have to tell you that I agree with much of the Governor's comments. It is only rational to pursue scientific standards. But we need to know what the benefits of these new standards are and the levels of protection these new standards would bring.

We don't really know at this point, and that's what makes me skeptical. One analysis in the Wall Street Journal said these proposals could cost more than $10 billion annually. And the Council of Economic Advisors estimates that the true cost of full attainment could be upwards of $60 billion. I realize that the EPA has stated that air quality standards are supposed to be based solely on their effect on the public's health and welfare and costs are not supposed to be considered in setting them.

That simply isn't realistic. Costs are considered in everything we do. I do think shouldn't the EPA have to show that a true benefit will occur? That, to me, is only logical. Major changes should not be recommended without considering the costs, because then you are not considering one, whether they can be attained, and two, whether they can be enforced.

The EPA analysis has failed to clearly demonstrate any quantifiable health benefit associated with the proposed ozone revisions. And the creation of a new PM2.5 particulate matter standard is being challenged by a number of segments of the scientific community as well as—at least at the level it is—as well as the EPA's own scientific advisory committee and other agencies in the Clinton administration for using questionable tools during the research. And

those have already been indicated through other testimony here today.

This debate, by the way, reminded me of a situation that we have in San Diego. Mr. Chairman, if you'll allow me very briefly to tell you that the Clean Water Act, which I also was a supporter of, required San Diego to go to secondary sewage clean up. It would have cost us $5 to $10 billion to do that. And cost was not a consideration. A single set of standards was adopted without taking any of the local differences into consideration. After being ordered to comply, sued, agreeing to a consent decree, refused permission to even apply for a waiver, and then having it granted, we eventually emerged victorious after numerous years and cost to the public. And the reason was science was on our side.

So all I'm asking is that when the EPA does this, it bases the new standards and the levels of those standards on real science, not on a guess.

Thank you, sir.

[The prepared statement of Ms. Golding follows:]

MAYOR SUSAN GOLDING
CITY OF SAN DIEGO, CALIFORNIA

Testimony before the
Subcommittee on National Economic Growth, Natural Resources
and Regulatory Affairs

David McIntosh, Chairman

Wednesday, April 16, 1997
11:00 a.m.

Mr. Chairman, Members of the Committee:

I appreciate the opportunity to speak before you today on the EPA's proposed standards for ozone and fine particulate matter.

As the Mayor of the City of San Diego, one of the largest cities in the country, I am keenly aware of the responsibility to protect the health of our citizen's, just as I am aware that the EPA honestly believes they will improve the health of San Diegan's if the air standards are made more stringent.

All cities should have cleaner air, however, simply ordering us to clean our air to meet unproven standards without clear implementation plans is not in the best interest of my city or any city in this nation.

As the basis for my comments, let me give you some basic background information on my region. San Diego is the sixth largest city in the nation with a population of roughly 1.2 million residents. Our County in total, has approximately 2.2 million residents.

Our air quality is monitored and regulated by our local Air Pollution Control Board. Unlike most states, California places the responsibility for achieving attainment standards in the hands of individual counties who then design programs to fit their unique needs.

Let me assure you we are committed to clean air for all our citizens. Our Air Pollution Control Board, on which I served as Chair, has been a leader in pursuing programs in general which have steadily improved our air quality over the last 10 years.

In San Diego, the number of days we exceeded the federal air quality standards dropped from 39 in 1990 to only 2 in 1996!

And I should note for the record that those two days were directly attributable to wind conditions we call "Santa Anas" which transport Los Angeles' "dirty air" to our region.

We already have rigorous control programs in place and working. We have a Compliance Division comprising 30 staff members who actively follow-up on citizen complaints and perform regular site visitations.

Our efforts produce tremendous results.

Yet even as good as we have become, our Air Pollution Control Board estimates that if the EPA's new proposed standards become law, our County could be out of compliance for ozone more than 40 times in the first year - and that we might not ever reach full attainment!

Because of the stricter standards we already have in California and the types of programs we have implemented to meet those standards, I am skeptical when the EPA says that by simply further regulating our already highly regulated stationary industries we can attain these new levels. It isn't always so.

According to the San Diego Air Pollution Control District's Annual Report, ozone producing emissions from businesses account for less than 15% of our region's air quality problems.

San Diego's aggressive 20-year air quality program has already reduced emissions from stationary sources through the application of strict emissions controls.

The emissions reduction "well" is dry. Any further minimal reductions from stationary sources can only come from "drilling the well deeper" into smaller businesses or industries with small emissions such as biotechnology, electronics or agriculture. And at what cost?

The questions we then would have to ask ourselves as elected officials is how do we make up this difference? If we're down to 15% on traditional sources, where do we turn for further reductions?

What other priorities would have to be compromised? Would we have to stop sweeping our streets for fear of raising airborne dust? Would we have to take actions against our citizens like outlawing fireplaces and barbeques as has been suggested for some areas? Would there be a loss of jobs because of costlier equipment mandates which could result in lost health care benefits and financial stability for our citizens? Wouldn't that also directly impact the health and welfare of our residents?

One analysis in the Wall Street Journal said these proposals could cost the American people more than $10 billion annually and the Council of Economic Advisors estimates that the true cost of full attainment could be up to $60 billion.

I realize the EPA has stated that air quality standards are supposed to be based solely on their effect on public health and welfare and that costs are not supposed to be considered in setting them. However, shouldn't the EPA have to show that a true benefit will occur?

It is illogical that these types of major changes would be recommended without considering costs since every new regulation has a cost.

The EPA analysis has failed to clearly demonstrate any quantifiable health benefit associated with the proposed ozone revisions. And the creation of a new PM2.5 particulate matter standard is being challenged by the scientific community as well

as the EPA's own scientific advisory committee and the agencies in the Clinton Administration for using questionable tools during the research. This includes not taking into consideration other risk factors such as diet and exercise which might have skewed the end results.

The fact that in February, the EPA revised their analysis for both ozone and the mortality rate associated with PM 2.5 is an indication to me that they recognized a problem in their proposals.

As I prepared for today's testimony, this debate reminded me of a situation we had in San Diego concerning our compliance with the Clean Water Act. In the interest of time I'll condense 20 years of ongoing debate into two minutes...

When the Clean Water Act passed in 1972 it required the EPA to mandate that we spend an estimated $5-10 billion or more to upgrade our primary sewage treatment plant to secondary treatment.

As is the current case with the air quality proposals, a single set of standards was adopted for all municipal dischargers whether their effluent entered a lake, stream, river, bay or as in San Diego's case the Pacific Ocean.

After being ordered to comply, sued, agreeing to a Consent Decree, refused permission to even apply for a waiver and then having it granted, we eventually emerged victorious. Why?

First, science was clearly on our side - Congress' own National Academy of Science undertook a study on "Wastewater Management for Coastal Urban Areas" which supported many assertions the City was presenting.

The Academy's report said that secondary treatment could lead to OVER-control and OVER -protection along open ocean coasts and that the 1972 Clean Water Act did not allow regulators to adequately address regional variations in environmental systems.

Does this sound familiar?

And then in 1994, after 10 years of lawsuits, and millions of wasted taxpayer dollars, the courts ruled in our favor and said the proposed upgrade requirements were "not in the public interest."

In a case of the federal government against a local government - where common sense is not applied - everyone loses.

The judge went on to say that the original Decree had no environmental benefit, required wasteful over treatment and unnecessary facilities - a savings to tax payers of billions of dollars.

Based on this experience, I'm sure you can see why I believe the EPA should take the time to reevaluate the air quality and health effects of their proposals and develop a sounder analysis. This is the only way to assure that public health issues are adequately and appropriately addressed.

Before these types of stringent requirements are adopted, the EPA needs to assure the American people that these new regulations are scientifically proven.

The EPA should withdraw the proposed standard for ozone and further scientifically analyze the potential health benefits before proposing revised standards.

Next it should it should implement and fully fund a PM 2.5 monitoring system and prepare and fund a work program to clarify the needed health effects data and suitable analytical tools.

At the end of the proposed monitoring period, the EPA would have quality PM 2.5 monitoring data, substantially improved health effects data and the necessary analytical tools to make an informed decision regarding revisions to the standard.

There must be a standard, which should be the goal we wish to achieve, but you can't say to the American people - we THINK this is going to help, even though we can't demonstrate a direct relationship between fine particulate matter concentrations and negative health impacts. We must know what a "safe" level really is and it must be based on sound scientific data.

And finally, I believe the EPA should release the underlying studies on which their recommendations are based, and allow an independent scientific team to review and assess the data. In a free nation no less is acceptable.

Mr. MCINTOSH. Thank you very much. And your record of environmental accomplishment is very impressive, I know, in San Diego. I appreciate your comments. Our third witness in this panel is a member of the Illinois House of Representatives. I noticed he is also chairman of the General Services and Equivalent Government Oversight Committee for that legislative body.

Mr. SCHOENBERG. Yes, sir.

Mr. MCINTOSH. Welcome. I appreciate you coming and sharing your testimony—Representative Jeffrey Schoenberg from Illinois.

STATEMENT OF JEFFREY SCHOENBERG, ILLINOIS STATE REPRESENTATIVE

Mr. SCHOENBERG. Thank you, Mr. Chairman and members of the subcommittee, for this opportunity to appear before you today to discuss the changes in the proposed ozone standards.

My name is Jeffrey Schoenberg and I am a State representative from the 59th District in Illinois. As the chairman indicated, I am currently chairman of the Illinois House Appropriations Committee for General Services and Government Oversight. I'm the vice chairman of the Human Services Committee. I sit on the Financial Institutions Committee. And I'm also a member of the Illinois Economic and Fiscal Commission, which is the State's bipartisan revenue forecasting agency.

My district is in the metropolitan Chicago area, specifically in suburban Cook County, just outside the city, and includes all or portions of Glencoe, Winnetka, Kenilworth, Wilmette, Evanston, Skokie, Glenview and Northfield. My legislative district also falls within one of the two ozone non-attainment areas in the State.

As stated earlier, one of the primary goals of the Clean Air Act Amendments of 1990 is to protect human health and the environment by providing safer, cleaner air for Americans. There is certainly no argument as to the desirability of this goal. I'm hopeful that, in the long run, the air quality standards proposed by the USEPA with respect to ozone and particulate matter can be achieved.

In an era when Government resources are already being strained to the limits, I am fearful, however, that these new standards are doomed to failure unless there is both adequate funding and new strategies for implementation of these standards. The economic consequences of the proposed rules, as Governor Voinovich and Mayor Golding pointed out earlier, will preclude any health gains and will result in differences for the people of my area and others and the entire metropolitan Chicago area unless there is effective cooperation between USEPA and the affected governmental entities.

Just several days ago, the Illinois legislature made a concerted effort to further ensure that the public interest is well served with respect to clean air issues. Just last week, we in the House passed legislation that would require the Illinois EPA to submit any proposed revisions to the State implementation plan to the general assembly for public hearings 60 days prior to submission to the USEPA. In my view, it is imperative that these open hearings are held. The public must be permitted to comment on any proposed changes to Illinois' clean air standards and their impact on the en-

vironment, energy use, utility costs and rates, economic development, transportation fuel costs, and industrial competitiveness.

As legislators, we believe that it is not necessary to submit a plan to USEPA that is more stringent than the proposed standards and more costly to implement unless the Illinois EPA can demonstrate otherwise. Furthermore, last year the Illinois House passed a resolution regarding the EPA's review of the national ambient air quality standards for ozone and particulate matter. The Illinois House Resolution 95 urged the USEPA to test the potential health impacts and economic consequences on the State as it conducted its review of the existing standards.

This policy statement, which was forwarded to USEPA Administrator Browner, also urged the agency to identify any unfunded mandates or other administrative burdens for State and local governments, agencies, citizens and consumers in non-attainment areas. Since raising the existing standard would expand the number of ozone non-attainment areas, it seemed likely that Illinois and its citizens would be significantly burdened with a massive unfunded mandate. Stricter standards would impose new mandates on vehicle inspection maintenance programs, limit economic development, require the use of reformulated gasoline, and result in other controversial emission controls in these non-attainment areas.

That was last year. Now, under the newly proposed NAAQS regulations, our worst fears of a massive unfunded mandate have apparently been realized. Although the numbers have been disputed—they're either higher or lower depending on who you consult—the estimated implementation costs for the proposed PM2.5 regulation ranges anywhere from $2 to $14 billion. These are USEPA's own figures from their regulatory impact analysis ES–14. USEPA claims that approximately 60 percent of those costs would be incurred by non-attainment areas east of the Mississippi River, including the Chicago metropolitan area.

In their formal comments USEPA, the Illinois EPA stated that the implementation costs of the proposed regulations will indeed have a "significant economic impact," thus triggering the Unfunded Mandates Reform Act of 1995. Under the act, USEPA is required to estimate the aggregate economic impact that the revised standards will have on State and local governments. The agency is also required to complete and publish and in-depth analysis that provides: one, a qualitative and quantitative assessment of the anticipated costs and benefits of the mandate; two, analysis of Federal financial assistance and other Federal resources available to State and local governments; three, estimates of future compliance costs; four, analysis of any disproportionate budgetary effects on any regions, States or localities; five, estimates of the effects on the national economy; six, reports of EPA's prior consultation with elected State and local officials; seven, summary of submitted comments from the various levels of government; and eight, EPA's evaluation of those comments.

The USEPA must make adequate resources available and provide flexibility upon implementation of the proposed regulations. In their formal comments, the Illinois EPA stated that, "It is essential that USEPA recognize the significant costs associated with the im-

plementation of NAAQS for PM2.5 and that it commit to providing the States with the necessary funding."

Currently, it costs the State of Illinois $830,000 annually for ozone and particulate matter monitoring in the non-attainment areas. Our State's EPA staff estimates further that the capital costs for monitoring site equipment will cost the State an additional $500,000 over the 3-year phase-in period for the new standards. While the EPA has released its regulatory impact analysis, its cost estimates are widely perceived to be unrealistically low. Even if the EPA is lowballing its estimates of $2 to $14 billion, that is still far too high for counties and cities that must meet their financial obligations with limited resources.

A recent American Petroleum Institute study estimated the cost at $11 to $60 billion for ozone, and at least $25 billion for the PM standard. This is an incredible amount of money—money that most States, including Illinois, simply don't have. The health goals behind the proposed standards cannot be reached without a properly funded implementation strategy. These new standards will have a highly negative impact on the people who reside in the city of Chicago proper and its outlying suburban communications if USEPA does not provide adequate administrative and financial support.

The limited resources that are currently allocated for other environmental programs such as the Brownfield redevelopment, which has been a major economic development and environmental policy initiative of the administration of Chicago Mayor Richard M. Daley; improvements in commuter rail lines; Superfund site remediation, and other conservation projects would be diverted away from these major programs. There are far greater environmental benefits for both city and suburban residents of the metropolitan Chicago area by updating the rail system and providing efficient public transportation than by setting a clean air standard that is unattainable and which will drain precious financial resources. The metropolitan Chicago area has an excellent and accessible public transportation system which brings tens of thousands of commuters in and out of Chicago's downtown area daily.

In conclusion, we need to continue focusing on the long-term objective, which is that clean air is an important aspect of good public health and welfare. But if the USEPA is going to set tougher ozone standards, then the Agency must work closely with the States and specific non-attainment areas when amending implementation plans to be as flexible as possible and to provide additional funding. We should be working together to set attainable goals. The clean air standard should be set at a level that is scientifically reasonable and financially possible to achieve. Prior to finalizing the new ozone and particulate matter standards, the USEPA must first adhere to all aspects of the Unfunded Mandates Reform Act, specifically identify financial resources available to State and local governments, and provide estimates of future compliance costs.

After all, money spent on attaining the new standards is likely to be money diverted from other effective State and local programs. It's only reasonable to require that the USEPA fulfill its obligation under the law, especially when billions of dollars are at stake. On

behalf of the city and suburban residents of the Chicago metropolitan area and the State of Illinois, thank you for this opportunity to present this testimony before the committee.

I'm happy to answer any questions. Thank you.

[The prepared statement of Mr. Schoenberg follows:]

Testimony Before the House Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs on EPA's Particulate Matter and Ozone Rule-Making

By: Jeffrey M. Schoenberg,
Illinois House of Representatives 58th District
April 16, 1997

Mr. Chairman and members of the subcommittee, thank you for this opportunity to appear before you today to discuss the changes in the proposed ozone and particulate matter standards. My name is Jeffrey M. Schoenberg and I am a state representative from the 58th district in Illinois. I currently serve as Chairman of the House General Services and Government Oversight Appropriations Committee, and sit on the House committees of Human Services and Financial Institutions. I am also a member of the Illinois Economic and Fiscal Commission, the state's bipartisan revenue forecasting agency. My district is in suburban Cook County just outside the city of Chicago, and includes all or portions of Glencoe, Winnetka, Kenilworth, Wilmette, Evanston, Skokie, Glenview, and Northfield. My legislative district also falls within one of the two ozone non-attainment areas in Illinois.

One of the primary goals of the Clean Air Act Amendments of 1990 is to protect human health and the environment by providing safer, cleaner air for Americans. There can be no argument as to the desirability of this goal. I am hopeful that, in the long run, the air quality standards proposed by the USEPA with respect to ozone and particulate matter can be achieved. In an era when

government resources are already being strained to the limit, I am fearful, however, that these new standards are doomed to failure unless there is both adequate funding and new strategies for implementation of these standards. The economic consequences of the proposed rules will preclude any health gains and will result in difficulties for the people of my district and the entire Chicago metropolitan area unless there is effective cooperation between USEPA and the affected government entities.

I. Process: Illinois House Bill 1230 and Illinois House Resolution 95

The Illinois Legislature has made a concerted effort to ensure that the public interest is well-served with respect to clean air issues. Just last week, we passed legislation that would require Illinois EPA to submit any proposed revisions to the State Implementation Plan to the General Assembly for public hearings (60 days prior to submission to USEPA). It is imperative that open hearings are held. The public must be permitted to comment on any proposed changes to Illinois' clean air standards and their impact on the environment, energy use, utility costs and rates, economic development, transportation fuel costs, and industrial competitiveness. As legislators, we believe that it is not necessary to submit a plan to USEPA that is more stringent than the proposed standards, and more costly to implement unless Illinois EPA can demonstrate otherwise.

Last year, the Illinois House passed a resolution regarding EPA's review

of the National Ambient Air Quality Standards for ozone and particulate matter. Illinois House Resolution 95 urged USEPA to test the potential health impacts and economic consequences on the state of Illinois as it conducted its review of the existing standards. This policy statement, which was forwarded to USEPA Administrator Carol Browner, also urged the agency to identify any unfunded mandates or other administrative burdens for state or local governments, agencies, citizens, and consumers in new nonattainment areas. Since raising the existing standard would expand the number of ozone nonattainment areas, it seemed likely that Illinois and its citizens would be significantly burdened with a massive unfunded mandate. Stricter standards would impose new mandates on vehicle inspection maintenance programs, limit economic development, require the use of reformulated gasoline, and result in other controversial emission controls in these nonattainment areas.

That was last year. Now, under the newly proposed NAAQS regulations, our worst fears of a massive unfunded mandate have been realized. Although the numbers have been disputed—they're either higher or lower depending on which organization you consult—the estimated implementation cost for the proposed PM2.5 regulation ranges from $2 to $14 billion dollars. This is USEPA's own figure from their regulatory impact analysis (ES-14). USEPA claims that approximately 60% of those costs would be incurred by nonattainment areas east of the Mississippi River, including the metropolitan Chicago area.

In their formal comments to USEPA, the Illinois EPA stated that the implementation costs of the proposed regulations will indeed have a "significant economic impact," thus triggering the Unfunded Mandates Reform Act of 1995. Under the Act, USEPA is required to estimate the aggregate economic impact that the revised standards will have on state, local and tribal governments. The agency is also required to complete and publish an in-depth analysis that provides:

1. A qualitative and quantitative assessment of the anticipated costs and benefits of the mandate;
2. Analysis of federal financial assistance and other federal resources available to state, local, and tribal governments;
3. Estimates of future compliance costs;
4. Analysis of any disproportionate budgetary effects on any regions, states, localities and tribes;
5. Estimates of the effects on the national economy;
6. Reports of EPA's prior consultation with elected state, local and tribal officials;
7. Summary of submitted comments from the various levels of government; and
8. EPA's evaluation of those comments.

II. Estimated Costs Involved:

USEPA must make adequate resources available and provide flexibility upon implementation of the proposed regulations. In their formal comments, Illinois EPA stated that "it is essential that USEPA recognize the significant costs associated with the implementation of a NAAQS for PM2.5, and that it commit to providing the states with the necessary funding." Currently, it costs the state of Illinois $830,000 per year for ozone and particulate matter monitoring in the nonattainment areas. Illinois EPA staff estimated that capital costs for monitoring site equipment will cost the state $500,000 over the three-year phase-in period for the new standards.

While USEPA has released its regulatory impact analysis, its cost estimates are widely perceived to be unrealistically low. Even if EPA is lowballing its estimates of $2 - $14billion, that is still far too high for counties and cities that must meet their financial obligations with limited resources. A recent American Petroleum Institute study tagged the cost at $11 to $60 billion for ozone, and at least $25 billion for the PM standard. This is an incredible amount of money—money that most states just don't have. The health goals behind the proposed standards cannot be reached without a properly funded implementation strategy.

III. Impact on the Metropolitan Chicago Area

These new standards will have a highly negative impact on the people who reside in the city of Chicago and its outlying suburban communities if USEPA does not provide adequate administrative and financial support. The limited resources that are currently allocated for other environmental programs such as: Brownfields redevelopment, which has been a major economic development and environmental policy initiative by the administration of Chicago Mayor Richard M. Daley; improvements in commuter rail lines; Superfund site remediation; and conservation projects would be diverted away from these major programs. There are far greater environmental benefits for both city and suburban residents of the metropolitan Chicago area by upgrading the rail system and providing efficient public transportation, than by setting a clean air standard that is unattainable and will drain precious financial resources. The metropolitan Chicago area has an excellent and accessible public transportation system which brings tens of thousands of commuters in and out of Chicago's downtown area daily.

IV. Conclusion

We need to continue focusing on the longterm objective: clean air is an important aspect of good public health and welfare. But if USEPA is going to set tougher ozone standards, then the agency must work closely with the states and the specific nonattainment areas when amending implementation plans, to be as

flexible as possible, and provide additional funding. We should be working together to set attainable goals. The clean air standards should be set at a level that is scientifically reasonable and financially possible to achieve. Prior to finalizing the new ozone and particulate matter standards, USEPA must first adhere to all aspects of the Unfunded Mandates Reform Act, specifically identify financial resources available to state and local governments, and provide estimates of future compliance costs. After all, money spent on attaining the new standards is likely to be money diverted from other effective state and local programs. It is only reasonable to require that USEPA fulfill its obligation under the law, especially when billions of dollars are at stake. On behalf of the city and suburban residents of the Chicago metropolitan area, and the State of Illinois thank you for the opportunity to present this testimony before the committee, I am happy to answer any questions you may have.

Mr. MCINTOSH. Thank you very much, Representative. Our next witness hails from the district of our colleague, Jim Turner. I will yield a moment for him to introduce her.

Mr. TURNER. Thank you very much, Mr. Chairman. It is a pleasure to welcome and to introduce to the committee, Mayor Frances Monk from Port Neches, TX in my part of Texas. And I would say, Mayor, as a former mayor of a small town, myself, it's an honor to have you here speaking out on the impact of the proposed EPA regulations on our smaller communities, where, as you know, we struggle to balance budgets under very difficult circumstances. And in our part of the State, we work very hard to secure our economic base, to be sure we'll continue to grow and be viable in the years ahead.

I know you've worked with the Air Quality Advisory Committee of the regional council of government that you've been active with. And we welcome you here. And we look forward to your testimony. Thank you, Mr. Chairman.

Mr. MCINTOSH. My pleasure. Thank you, Mr. Turner. And I second that welcoming. Mayor.

STATEMENT OF FRANCES MONK, MAYOR OF PORT NECHES, TX

Ms. MONK. Thank you. I appreciate the opportunity to be here. I speak to you not from the science, not from the health, not from the cost-benefit analysis. My primary concern is that the setting of sound public policy is a fundamental function of government. And we're dealing with a policy matter here. Some years before the Clean Air Act amendment was implemented, industries in my region of Texas began to work together to reduce the harmful effects of pollution dramatically. I direct your attention to the first chart over here, which shows you the trend of ozone formation network in our region, which shows you from 1972 to the present time, we have made dramatic improvements in air quality.

These levels of progress have levelled off in the past few years. Since 1985, in spite of new technology, shutting down old refinery units, numerous control strategies which have been implemented, we've seen very little improvement. Why are these current efforts not moving us toward attainment? I submit, like many areas of the country, Texas has a variety of conditions that contribute to air pollution: dust storms in north Texas, the transportation problems of Dallas, Fort Worth, Houston metropolitan area. But the Texas Gulf Coast has a little different problem. Many of you know that folks from all over the country go to our part of the country to get to the sunshine, the water sports, escape from winter problems.

But those very assets in our environment contribute to the formation of ozone. We have so many beautiful trees, so much sunshine, and so many other factors, like swamps and swamplands that contribute to the precursors of ozone formation, that all of our efforts to lower our levels have had only very minor results. Science doesn't explain the meteorological impacts on ozone formation. Air transport has not been figured into the formula when the air monitors show an exceedance.

Actually, ozone exceedances are a rarity. If you look at the data, you find that they're not a common occurrence. In my area, for ex-

ample, we show attainment of the current ozone standard 99.98 percent of the time. Now, I submit to you that that's more pure than Ivory soap, and I was comfortable bathing my babies with that. If we look at the next chart, which shows the 1983 to 1995 chart, we see an almost flat line for ozone standard. Now, there are two lines on this chart. The dotted line represents the current standard.

The red line indicates the proposed new standard. Forty years in public school classrooms made me feel that a picture is worth many, many words. So I came armed with these charts to let you see not emotional appeals, but what the data shows. Compare the flat line with the long-term trend in Longview, TX, where you have an area that's not heavily industrialized.

Another comparison that you might—you see the flat line. Another comparison you might make is Phoenix, AZ, where the same pattern is reflected. I would direct you to the other charts that are in the pamphlet which you have before you, and tell you that all of this information came from EPA data bases.

This is available to any one of you. All you have to do is ask for it. If you are in a monitored region, EPA has this information, and they'll provide it for you. Before we set near impossibly unattainable standards, let's get a better understanding of the true source of the problem. How much does transport contribute? How much is background level for a region? My region, for example, shows a 0.04—0.08 background level. This is before we start operating the first business or industry.

And average background level doesn't show a true picture, since each region is unique. And with all of the Federal and State controls that have been imposed since 1972, the data do not indicate similar progress toward achieving the proposed standard. If the proposed new standards are adopted, hundreds more cities and counties will be forced to develop implementation programs that will affect small and large businesses as well as private lifestyles, all of this with no certainty that their efforts will be successful. We must ask ourselves if there is reasonable expectation that the proposed standards can be achieved.

Sound public policy requires standards which are both enforceable and attainable. If my small city had a traffic fatality problem, our city council might solve it by reducing the speed limit in the city to 5 miles an hour. But that would not be enforceable, nor would it be attainable, and would probably result in all of us being replaced at the next election.

We all support the goals of clean air and water. We can't ignore other critical concerns. While we pour millions of dollars into minute improvements in air quality, wouldn't it be better to work with the tools that will enable us to succeed instead of just arbitrarily setting standards which may not do anything other than provide economic hardship for our cities and counties and which do not consider other contributing influences on public health. My own asthma and that of my grandchildren is the result of milk and household molds.

Now, I don't propose that abolishing milk would be sound public policy. We are all in this struggle together. it's not a partisan effort. And we need to seek common, reasonable solutions.

Thank you.

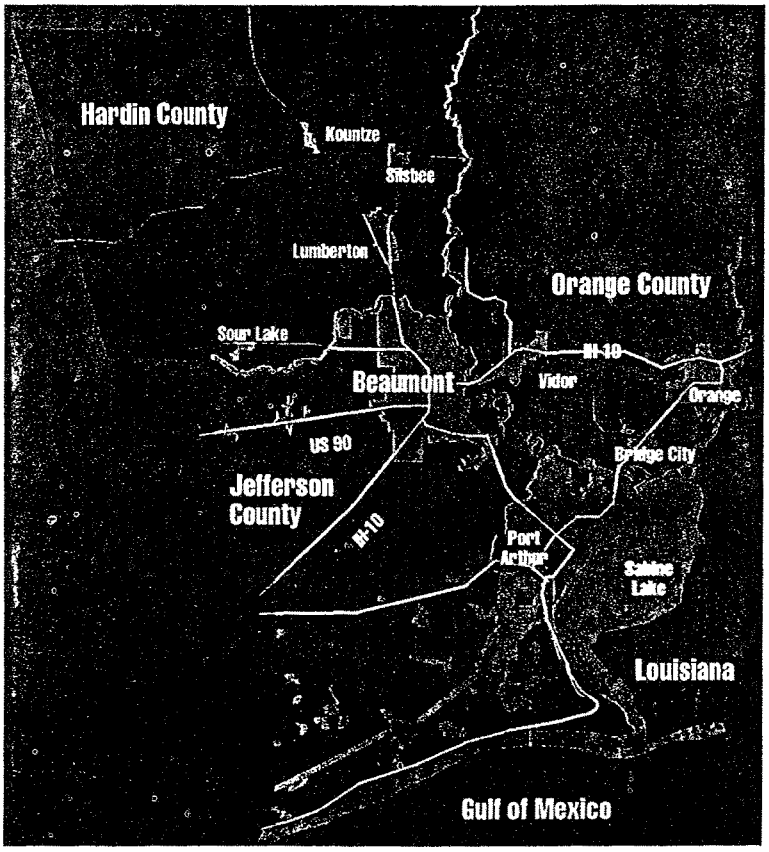
[The prepared statement of Ms. Monk follows:]

Testimony Before the House Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs

The South East Texas Regional Planning Commission

Air Quality Advisory Committee

SETTING SOUND PUBLIC POLICY



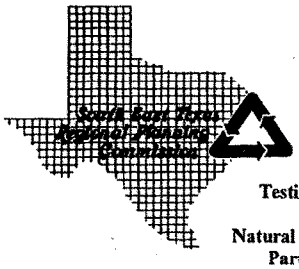
RADIAN INTERNATIONAL LLC

Setting Sound Public Policy

Testimony Before The House Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs

April 16, 1997

Ms. Frances Monk
Mayor
City of Port Neches, Texas



Testimony before the House Subcommittee on National Economic Growth, Natural Resources and Regulatory Affairs on EPA's Particulate Matter and Ozone Rule Making

PRESIDENT
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Mayor
City of Lumberton

1st VICE-PRESIDENT
LAMECH WRIGHT
Mayor
City of Vidor

2nd VICE-PRESIDENT
WAYMON HALLMARK
County Commissioner
Jefferson County

3rd VICE-PRESIDENT
JOHN GOLDEN
County Commissioner
Hardin County

TREASURER
CARL THIBODEAUX
County Judge
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Individuals are available to members of the subcommittee whose expertise far exceeds mine in the areas of environmental science, health effects and relative cost/benefit analyses of implementation of pollution reduction strategies. Therefore, I shall not attempt to present scientific explanation of the Environmental Protection Agency's policies or rules. As the Mayor of a small city which is located in the heart of a major petro-chemical industrial region, I can testify to the continuous and successful efforts of major industries to clean up the air, water and land in our region. It is my belief that we can only effectively design the future by reviewing the past. These are policy issues, and the setting of sound public policy is a fundamental function of government.

Since 1972, some years before the Clean Air Act, industries in Southeast Texas have worked together to reduce potentially harmful emissions dramatically. The have funded a private air monitoring network and have used the data obtained to design strategies to improve the air my grandchildren breathe. As a result of industry's efforts the region applied for a change in classification and succeeded in having a "serious" non-attainment designation reduced to a "moderate" designation last year. However, the early impressive strides in reducing ozone levels have declined since 1985, in spite of

new technology, shutting down old units and implementing numerous control strategies. (Chart) What we have done in recent years has resulted in very little improvement. Why are current efforts not moving us nearer to attainment?

Texas, like many parts of the country, reveals a variety of conditions which contribute to air pollution. From the dust storms of North Texas to the transportation exhausts of major metropolitan areas like Dallas/Fort Worth or Houston/Galveston the causes are different, and the solutions cannot be of the "Cookie Cutter" variety. The Texas Gulf Coast enjoys a great deal of sunshine, many trees and vast areas of marsh and swamp land. As a result of these biogenic sources of ozone pre-cursors, the very elements which are natural to our environment contribute to background levels of ozone which place us very near to the proposed new standards. Science does not explain meteorological impacts on ozone formation. Air transport is not considered when air monitors record an exceedance. Actually, ozone exceedances are a rarity rather than a common occurrence. In my area, for example, we show attainment of the current standard 99.98% of the time, this is more pure than Ivory soap, and we are comfortable bathing our babies with Ivory.

Looking at data from 1983 to 1995 (Chart) we see an almost flat line for ozone design value. This is with stringent control measures by industry, new technology, eliminating old units and educating the general public with an "Ozone Action Day" program. Compare this with the long-term trend in Longview, Texas, where we observe an area that is not heavily industrialized. (Chart) In Houston, where an Inspection and Maintenance program is in effect, we see the same flat line. For comparison, in Phoenix, Arizona, the same pattern is reflected. (Chart) This information is available to you from EPA's own database for any monitored region in the nation (many other regions are presented in the

folder). Before new and possibly unattainable standards are set, let us get a better understanding of the true source of the problem. How much does transport contribute? How much is the background level for a region? An average is not an accurate picture, since each region is unique. With all of the Federal and state controls imposed since 1972, and considering our progress toward meeting the current standard, the data do not indicate similar progress toward attaining the proposed standard! If the proposed new standards are adopted, hundreds of cities and counties will lose the attainment designation they currently enjoy and will be forced to develop implementation programs which affect small and large businesses as well as private lifestyles. All this – with no certainty that their efforts will be successful.

There are some suggestions I would like to make. EPA could provide a mechanism to address anomalous meteorological conditions such as occurred all over the country in 1995. We must ask ourselves if there is a reasonable expectation that the proposed standard can be achieved. For the past three years I have served on a national air quality task force which met with EPA representatives in an effort to persuade them to look at the big picture – to recognize the health benefits are not precisely defined and that cost is a critical factor for struggling businesses. Sound public policy requires standards which are both enforceable and attainable. If my city had a serious problem with traffic related fatalities, our city council could set a 5 mph speed limit all over town. It might sound like a good solution but, would not be enforceable and would probably result in voter rebellion at the next election. If the proposed standard is not attainable, then it does not represent sound public policy.

Most of us are interested in the goals of clean air and water. We cannot ignore other critical concerns – while we pour millions of dollars into minute improvements in air quality. Would it not be better to

work to improve the tools which will enable us to succeed instead of arbitrarily setting standards which will bring industrial flight to other countries, economic hardship for cities and counties and which do not consider other contributing influences on public health? We are all in this struggle together, and we need to seek common and reasonable solutions.

Setting Sound Public Policy

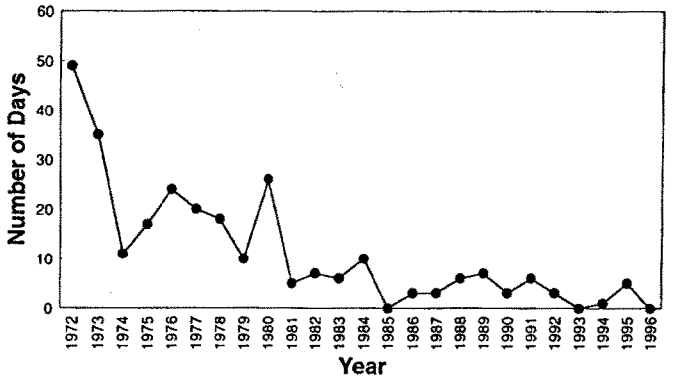
Key to the future is in reviewing the past

» Current Standard

» Proposed Standard

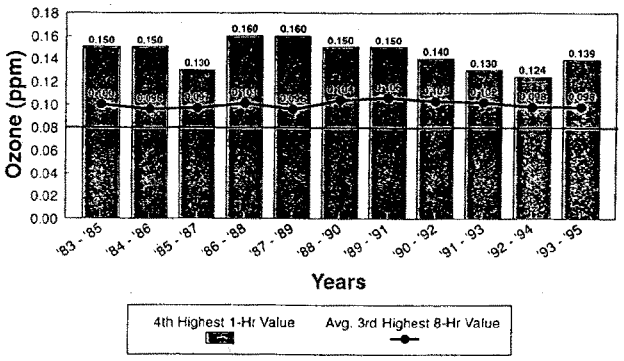
Setting Sound Public Policy

Historical Trends of Ozone Exceedance Days in Beaumont - Port Arthur, TX (TNRCC Historical Data)



Setting Sound Public Policy

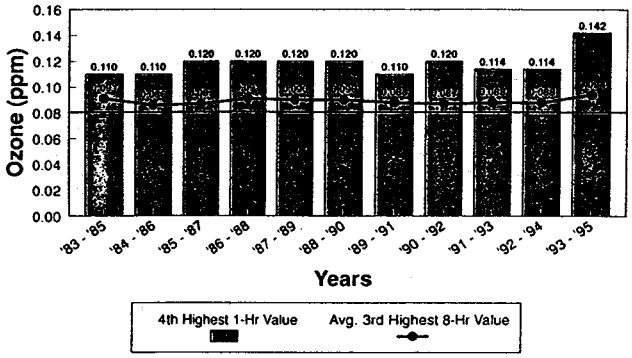
Trends in 1-Hour and 8-Hour Ozone Design Values for Beaumont - Port Arthur, TX



The existing 1-hr standard is attained when the 4th highest daily maximum 1-hr value does not exceed 0.12 ppm. The proposed 8-hr standard is attained when the average 3rd highest daily maximum 8-hr value does not exceed 0.08 ppm.

Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Longview, TX



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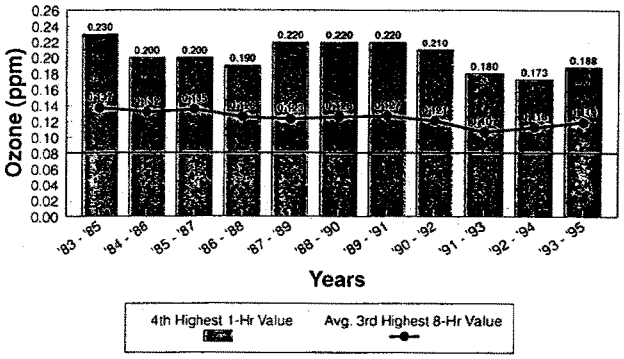
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Houston, TX



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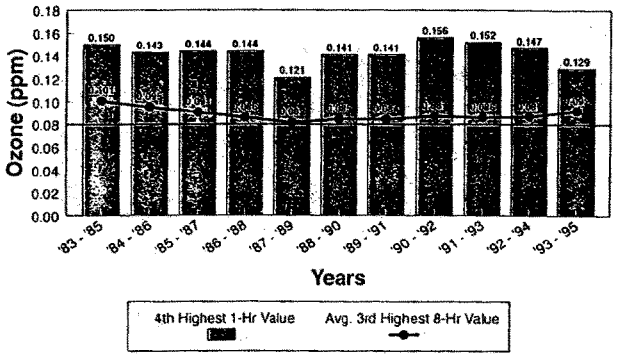
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Phoenix, AZ



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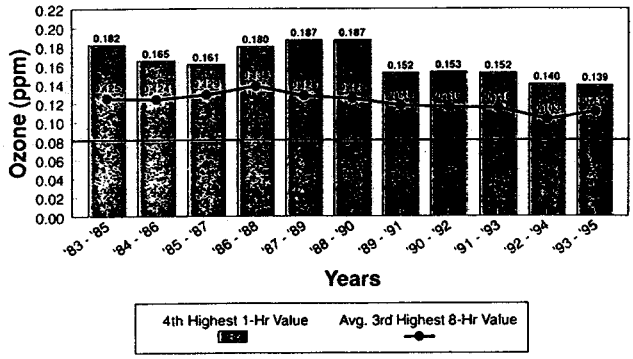
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Philadelphia, PA



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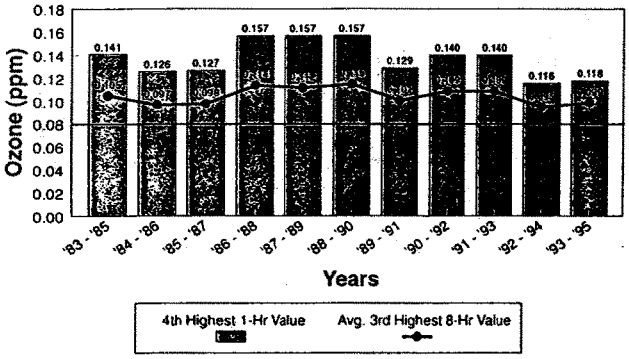
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Cleveland, OH



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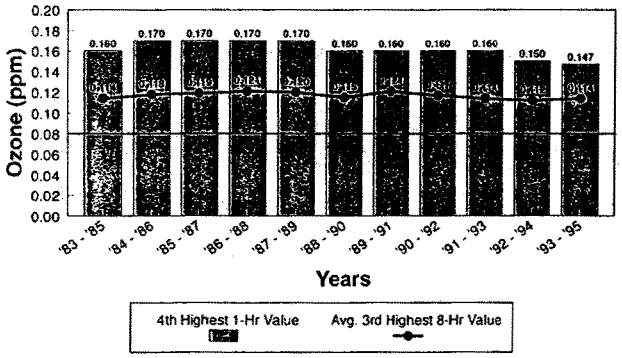
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for San Joaquin Valley, CA



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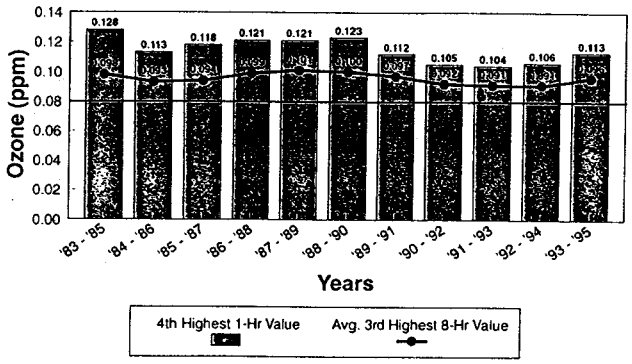
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Indianapolis, IN



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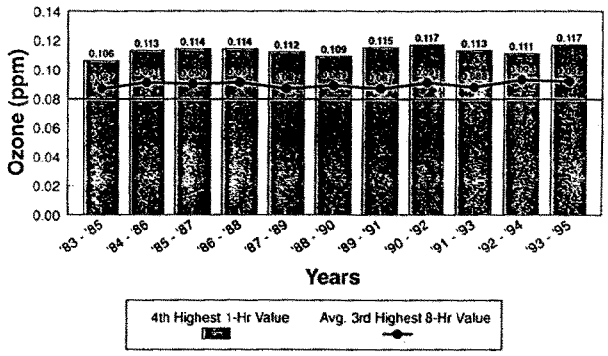
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Pensacola, FL



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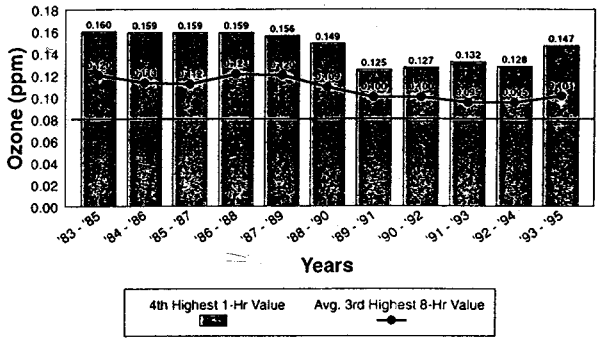
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for St. Louis, MO



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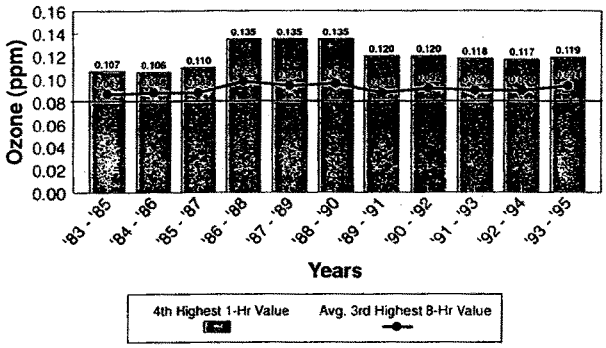
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Knoxville, TN



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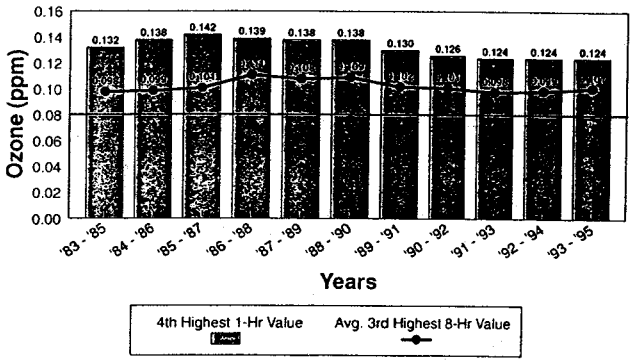
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Nashville, TN



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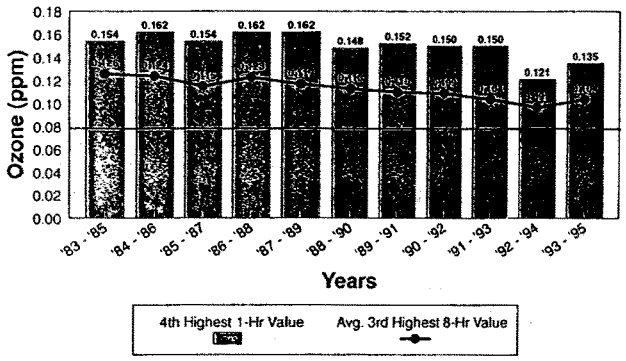
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Providence, RI



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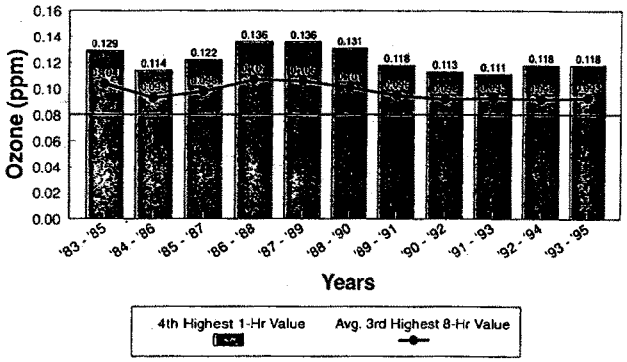
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Harrisburg, PA



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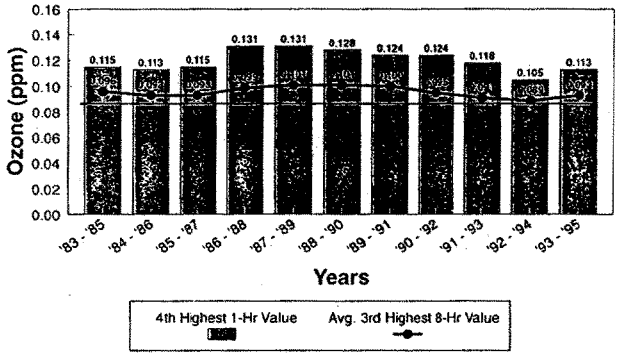
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Columbus, OH



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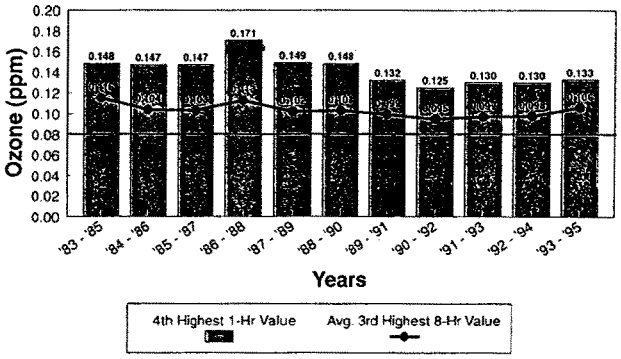
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Louisville, KY



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Setting Sound Public Policy

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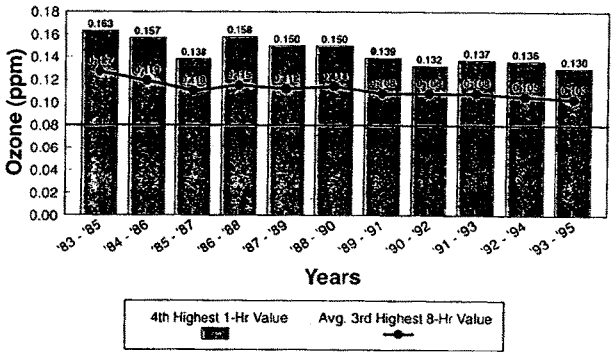

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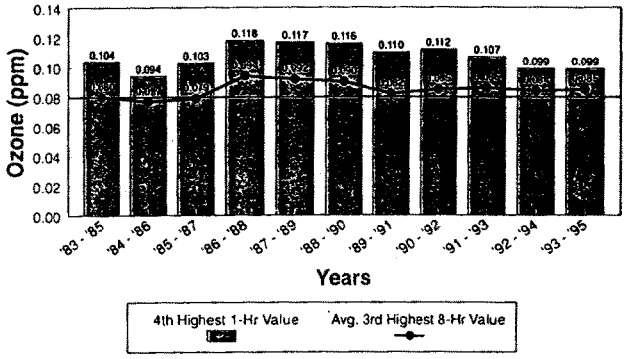
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Lansing, MI



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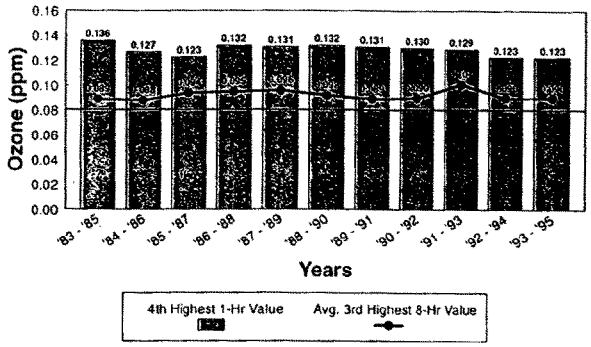
Setting Sound Public Policy

Trends in 1-Hour and 8-Hour Ozone Design Values for Lake Charles, LA



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Setting Sound Public Policy

Implementation of Various Control Measures in Selected Cities

	Basic I/M	Enhanced I/M	Stage II Vapor Recovery	Alternate Fuel Fleet
Phoenix	Y (1975)	Y (1995)	Y	Y
Louisville	1984	N	Y	N
Beaumont	N	N	Y	N
St. Louis	Y (1985)	N	Y	N
Boston	Y (1983)	N	Y	Y
Cleveland	Y (1988)	Y (1996)	Y	N
Nashville	Y (1985)	N	Y	N

Y = Implemented (Year if Known)
N = Not Implemented

Setting Sound Public Policy

We support sound policy decisions, but it is our opinion that it is not sound public policy to set a standard that cannot be attained

Setting Sound Public Policy

Speed
Limit

5 MPH

Setting Sound Public Policy

Before we set a new, and possibly unattainable standard, let's get a better understanding of the true source of the problem

Setting Sound Public Policy

With all of the Federal and state controls imposed since 1972, and considering our progress toward meeting the current standard, the data do not indicate similar progress toward attaining the proposed standard!

Setting Sound Public Policy

We are all in this together, and we need to seek common and reasonable solutions

January 8, 1997

PRESIDENT
JERRY WILLIAMSON
Mayor
City of Lumberton

1st VICE-PRESIDENT
LAMECH WRIGHT
Mayor
City of Vidor

2nd VICE-PRESIDENT
WAYMON HALLMARK
County Commissioner
Jefferson County

3rd VICE-PRESIDENT
JOHN GOLDEN
County Commissioner
Hardin County

TREASURER
CARL THIBODEAUX
County Judge
Orange County

SECRETARY
DAVID W. MOORE
Mayor
City of Beaumont

LEGAL COUNSEL
DAVID SHEFFIELD
County Attorney
Hardin County

EXECUTIVE DIRECTOR
DON KELLY
3501 Turtle Creek Drive
Port Arthur, Texas 77642
Telephone (409) 727-2384
FAX (409) 727-4078
setrpc@setrpc.co.jefferson.tx.us
e-mail - setrpc @ ih2000.net

P.O. Drawer 1387
Nederland, Texas 77627

Mr. Chuck Mueller
Office of Air Policy
Texas Natural Resource Conservation Commission
P. O. Box 13087
Austin, TX 78711-3087

Dear Mr. Mueller:

The Air Quality Advisory Committee of the South East Texas Regional Planning Commission, at its meeting on January 6, 1997, approved the following comments regarding the proposed Ozone Standard as published in the December 13, 1996 Federal Register, and respectfully requests their inclusion in the comments which the Commission submits to the United States Environmental Protection Agency:

Significant reductions in ozone precursors have been accomplished in the Beaumont-Port Arthur-Orange area since 1972. Air quality monitoring data from 1972 to 1995 at monitors operated by the Texas Natural Resource Conservation Commission clearly reflect the downward trend in ozone levels. In fact, in 1993 and 1996 no exceedances were recorded. For the three year period 1992-1994 the area demonstrated that it had attained the ozone standard. Data for 1995 appears to indicate otherwise but we believe that data was not a reflection of overall air quality in our area. It indicates that there are factors other than locally-generated emissions involved in ozone formation over which we may have little or no control.

Over the next several years, additional emissions control requirements relating to air toxics and ozone precursors will become law. The MACT standards will necessitate the installation of marine vessel loading emissions controls at several sites in the area. In

addition, the currently proposed extention to the Sections 182(f) and 182(b) NOx exemptions will expire on December 31, 1997 and additional actions will be taken to monitor and, where required, reduce emissions of oxides of nitrogen. These requirements will further reduce the emissions of ozone precursors.

Our committee has conducted an extensive review of the TNRCC monitoring data and has applied the proposed standard of the three year average of the annual third highest daily maximum eight-hour average ozone concentration not to exceed 0.08 ppm to existing data to determine if there is a corresponding reduction in recorded exceedances as we see in our review of the data for the current one-hour standard. Even with all the controls which have been implemented, there does not appear to be a downward trend which would give us encouragement that the implementation of an eight hour standard of 0.08 ppm can be met. We believe any standard should not only be realistic but attainable, however laudable the goal.

It is our understanding that the Clean Air Scientific Advisory Committee and EPA staff papers conclude independently that a standard in the range of 0.07 to 0.09 ppm would all be protective of public health. Given the assessment which we have made of the data, and the fact that there is little information available from EPA regarding the trends toward attainment of the proposed standard in the 335 counties which will potentially be affected by the proposed standard, we believe that there should be a reasonable expectation of attainability of any standard.

Based on the fact that a standard of 0.09 ppm would be protective of public health, and that EPA, on page 65733 of the December 13, 1996 Federal Register, states that 0.09 ppm generally represents the continuation of the present level of protection, the Air Quality Advisory Committee of the South East Texas Regional Planning Commission requests that the Texas Natural Resource Conservation Commission recommend to the Environmental Protection Agency that the present standard of 0.124 ppm one-hour average be retained. Based on our review of the data, this appears to be a reasonable and attainable standard for our area. In addition, protection of the public health and the economy can both be realized. In the event that this

recommendation is not acceptable, we urge the Texas Natural Resource Conservation Commission to recommend to EPA that the standard be set at no lower than 0.09 ppm eight-hour average based on the third highest daily maximum.

We believe that continuation of the present standard would be protective of public health and allow for economic growth. We do not believe it would be in the public interest to infer that public health will not be protected if any standard other than the proposed 0.08 ppm is promulgated.

Please find attached the monitoring data which our contractor, Radian International, has prepared based on TNRCC monitoring at sites indicated.

We appreciate the opportunity to provide comments.

Sincerely,

Michael Peters

Michael Peters
Chairman
Air Quality Advisory Committee

MP/ah
Attachment

Barry R. McBee, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Dan Pearson, *Executive Director*

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 10, 1997

Office of Air and Radiation Docket and Information Center
Attn: EPA Docket No. A-95-58
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Re: Comments on the Proposed Revisions to the Ozone Standard

Dear Sir or Madam:

The Texas Natural Resource Conservation Commission (commission) would like to take this opportunity to comment on the proposed revisions to the Ozone Standards.

The commission has carefully reviewed all available information regarding the U.S. Environmental Protection Agency's (EPA) proposal to change the ozone standard and has concluded that there truly is no clear demarcation from a public health protectiveness perspective among the various levels and form for the standard under consideration. EPA's science advisory panel, the Clean Air Scientific Advisory Committee, stated that there is no "bright line" that distinguishes a level for an eight-hour standard between 0.07 parts per million (ppm) and 0.09 ppm, and a form between 1 and 5 expected exceedances. Now, EPA's own recent supplemental ozone exposure and health risk analyses show that there is no bright line in setting an averaging time either, and indeed calls into question the assumption that one particular averaging time, form, or level is appropriate for all areas in the nation. The commission is extremely concerned about these findings and in light of them recommends that the current one-hour standard be retained at this time, and that further study be initiated to determine the advisability of moving to an eight-hour standard for the entire nation. This is included as the commission's primary recommendation in Enclosure 1.

While the commission is not recommending a revision to the ozone standard at this time, should EPA do so, the commission submits for consideration a secondary recommendation in Enclosure 2.

The commission has held numerous meetings across the state to receive input from Texas citizens, small business, local governments, and industry. We received over 2000 comments, which demonstrates the interest that Texans have in these air quality standards and the impacts on their areas. We have forwarded these comments to you under separate cover.

Thank you for allowing Texas to comment on this important air quality issue. Please contact any of us or Mr. Herb Williams of our staff at (512) 239-4885 if you have any questions.

Respectfully,

Barry R. McBee Chairman	Ralph Marquez Commissioner	John Baker Commissioner

BRM/EJ/ls

Enclosures

cc: The Honorable George W. Bush, Governor of Texas

bcc: Dan Pearson, Executive Director, MC 109
VA Stephens, Executive Assistant, MC 100
John Hofmann, Executive Assistant, MC 100
Dan Eden, Executive Assistant, MC 100
Geoff Connor, General Counsel, MC 101
Dan Wittliff, Chief Engineer, MC 110
Jeff Saitas, Deputy Director, Air Quality, MC 161
Doyle Pendleton, Director, Monitoring Operations Division, MC 165
Jim Price, Monitoring Operations Division, MC 165
Beverly Hartsock, Deputy Director, Office of Policy and Regulatory Development
Russ Baier, Director, Policy Research Division
Herb Williams, Director, Air Policy and Regulations Division
Chuck Mueller, Manager, Policy Coordination and Development Section
Liz Johnson, Policy Coordination and Development Section
Brian Foster, Policy Coordination and Development Section
John Gillen, Policy Coordination and Development Section

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Enclosure 1

Texas Natural Resource Conservation Commission's (commission) Primary Recommendation on the U.S. Environmental Protection Agency's (EPA) Proposed Revision to the Ozone Standard

The commission has carefully reviewed all available information about the EPA's proposal to change the ozone standard and has concluded that the standard setting process has not produced the "bright lines" we all desired. EPA's science advisory panel, the Clean Air Scientific Advisory Committee (CASAC), is comprised of several of the nations top medical and scientific experts. CASAC has stated that there is no bright line that distinguishes a level for an eight-hour standard between 0.07 parts per million (ppm) and 0.09 ppm, and a form of between 1 and 5 expected exceedances. Now, EPA's own recent supplemental ozone exposure and health risk analyses also show that there is no bright line in setting an averaging time, and indeed call into question the assumption that one particular averaging time, form, or level is appropriate for all areas in the nation.

On February 11, 1997, Harvey Richmond of EPA's Risk and Exposure Assessment Group issued a memorandum entitled **Supplemental Ozone Exposure and Health Risk Analyses**. This memo summarized recent findings of two EPA contracted documents. One is titled **A Probabilistic Assessment of Health Risks Associated with Short-Term Exposure to Tropospheric Ozone: A Supplement** by R.G. Whitfield of Argonne National Laboratory. The other is **Supplement to 'Estimation of Ozone Exposures Experienced by Outdoor Children in Nine Urban Areas Using a Probabilistic Version of NEM (April 1996)'** by Ted Johnson of TRJ Environmental Inc., et al. Both of these document updates were published in January, 1997. These documents were updated at EPA's request after the proposed revision to the primary ozone standard was published. These updates contain several refinements to modeling assumptions, including an analysis of the risk exposure associated with EPA's proposed level and form, and different rounding conventions, which were lacking in the original risk exposure analysis.

A review of these documents shows that for seven out of nine selected cities, the risks of both exposure to levels above the standard and "large" lung function decrements to children playing outdoors associated with EPA's proposal are less than that under the current standard. However, there are two notable exceptions to this trend. The risk exposure analysis for both Houston and Los Angeles projects that fewer children playing outdoors would be exposed to and suffer the effects of elevated ozone levels under the current one-hour standard than under EPA's proposal for an eight-hour standard.

At the very least, the commission believes that this study, which shows different public health outcomes for cities attaining an eight-hour standard, reveals that the science is not sufficiently conclusive at this time to make a decision on the appropriate averaging time for the primary standard. The commission is extremely concerned about these findings and in light of them

recommends that the current one-hour standard be retained at this time, and that further study be initiated to determine the advisability of moving to an eight-hour standard for the entire nation. For example, Houston and Los Angeles have design values for the one-hour standard that are 50 parts per billion or more higher than those of the next highest city, New York. They are also both warm, southern coastal cities, unlike the other study cities (except for Miami, which had an extremely low one-hour design value in the study). Other southern cities like Atlanta and Dallas were not studied, and cities currently in attainment that would be nonattainment under the proposed standard, like San Antonio, were also not studied. Therefore, it is not known whether the results for Houston and Los Angeles differ from those of the other cities because of their high ozone values or because of their geographic similarities. In order for the commission to support an eight-hour standard at this time, a fuller understanding of why Houston and Los Angeles experienced different outcomes than the other study cities would be necessary, as would an analysis of other major Texas cities and cities around the nation with similar geographic features.

The commission believes that these studies are absolutely essential to making a public health-based decision on the best science available. These studies cannot be completed in the time frame mandated by the courts for the particulate matter standard decision. Therefore, the commission recommends that EPA decouple the time lines for promulgation of the ozone and particulate matter proposals and delay promulgation of the ozone standard until further necessary studies have been performed.

The commission believes that cities such as Los Angeles and Houston may well be unique in their air pollution problems due to their source mix and prevailing meteorological conditions. If further study proves that they are, the commission believes that a "one-size-fits-all" approach to standard setting may not be prudent on a national basis, and that regions may have to choose an averaging time for an ozone standard that provides the greatest protection to the public. Of course, this choice would have to be based on sound science, and under no circumstances should areas be forced to comply with two national standards.

The commission believes that significant progress in understanding key scientific and public policy aspects of air pollution control has been made by the Federal Advisory Committee Act's Subcommittee on Ozone, Particulate Matter, and Regional Haze. The commission recommends that regardless of the ozone standard averaging time eventually promulgated by EPA, this vital work should continue and its results should be incorporated on the state implementation plan process, as appropriate.

Enclosure 2

Texas Natural Resource Conservation Commission's (commission) Secondary Recommendation on the U.S. Environmental Protection Agency's (EPA) Proposed Revision to the Ozone Standard

As stated in the preceding primary recommendation, due to numerous uncertainties that exist with regard to EPA's new ozone proposals including recent information that questions whether an eight-hour standard is more protective than the current standard in all areas of the nation, the commission believes that the EPA should retain a one-hour standard for now. However, if additional studies determine that an eight-hour standard is more protective than the one-hour standard in all areas of the country or if EPA chooses to go forward without additional studies, then the commission would support an eight-hour standard with the following comments as a secondary recommendation.

Level

The commission does not support the 0.08 parts per million (ppm) level proposed by the EPA, nor would it support a lower level. The commission supports a level of at least 0.09 ppm for the following reasons.

Both Clean Air Scientific Advisory Committee (CASAC) in its closure letter on the proposed primary ozone standard dated November 30, 1995 and EPA have determined that ozone may elicit a continuum of biological responses down to background levels. Therefore, it is not possible to select a level below which absolutely no effects are likely to occur. CASAC and EPA have agreed that in the absence of a "bright line" which clearly demonstrates a level at which exposure to ozone begins to cause adverse effects, the selection of a specific level is a policy judgment. The level proposed by EPA may result in five new areas in Texas not meeting the new standard, more than doubling the number of areas that do not meet the current ozone standard.

EPA lacks a scientific basis on which to choose between a 0.08 ppm and 0.09 ppm level for an eight-hour standard because there are no demonstrably greater health benefits to be gained at any specific point within the range of 0.07 ppm to 0.09 ppm. The commission believes that the following elements of good public policy should inform EPA's decision on the level of the standard.

Attainability. Is the proposed standard reasonably attainable? There are serious questions about the attainability of a proposed standard that approaches background concentrations. In its own Regulatory Impact Analysis (RIA), EPA states that:

> For some counties the analysis finds that the control measures identified in the cost analysis would not be sufficient to result in attainment of the alternatives by 2007...(t)here

are likely to be cases in which currently identifiable controls are not enough to reach attainment of the revised standard by 2007, which is the attainment date for certain nonattainment areas under the current standard.

Houston is one of the areas identified in the RIA for which not enough control measures could be identified for it to reach attainment of the proposed standard. If there are not enough control measures identifiable at any cost that would allow Houston to reach the proposed standard, for all practical purposes it is not attainable.

Reasonableness of costs incurred in light of benefit gained. EPA has argued that costs cannot play a role in the standard setting process based on judicial interpretation of the Federal Clean Air Act. The commission believes that this can be the case if a clear scientific determination of health effects could be demonstrated. However, neither EPA nor CASAC can determine a bright line which distinguishes any of the proposed standards as being significantly more protective of human health. Therefore the setting of the exact level has become a policy decision. Because it is a policy decision, a cost/benefit comparison of alternatives can and should properly be taken into consideration. Furthermore, costs to the public versus benefits is a vital public health consideration. All other public health and welfare decisions (e.g., building codes, immunization requirements, automobile safety requirements) are based on some determination that a certain level of control is necessary and therefore the costs should be borne by society. Conversely, some other level of control, while perhaps technically feasible, is too costly, and will therefore not be required.

EPA has stated in its fact sheets that the monetized net health benefits for the proposed new standards (ozone and particulate matter under 2.5 microns in diameter ($PM_{2.5}$) combined) are estimated to be between $76 billion to $134 billion dollars. However, a closer reading of EPA's back-up documentation (including the RIA), reveals that most of the monetized benefits are realized from attaining a $PM_{2.5}$ standard, and that there is actually a net monetary loss of up to $2 billion dollars incurred by attaining the proposed ozone standard. The commission believes that a full cost-benefit analysis should be performed and that the costs and benefits of the continued implementation of the Clean Air Act Amendments of 1990, the Ozone Transport Assessment Group recommendations, and the costs and benefits of the Interim Implementation Policy should be factored into the analysis. The commission believes that including these programs in the analysis will more accurately assess the true cost of all programs which will contribute to attainment of the proposed new standard.

Flexibility of decision-making in light of uncertain science. Before additional regulations and costs are placed on the public, the federal and state governments have an obligation to be sure that those costs are required for the protection of public health. If the standard is set at 0.08 ppm, many areas that currently do not violate the one-hour standard will not comply with the eight-hour standard. They will be required to begin expensive control programs. If later scientific evidence definitively shows a level of 0.09 ppm to be protective of health, these areas will have sustained a considerable economic loss for little or no benefit. However, if the level is set at 0.09 ppm, the

areas with demonstrated air pollution problems will be required to implement control strategies. If a level of 0.08 ppm is later scientifically demonstrated to be necessary for the protection of health, the reductions made by the areas that could not meet the 0.09 ppm standard will have helped them attain or make progress toward attainment of a 0.08 ppm level.

The commission believes that when all of these factors are taken into proper consideration, a level of at least 0.09 ppm would be the correct public health and public policy choice at this time for an eight-hour standard.

Form

The commission supports a form expressed as the three-year average of either the third, fourth, or fifth-highest maximum eight-hour average ozone concentration. The commission believes that such a form more accurately reflects the exposure of the population to ozone levels of concern. Also, this form is less subject to random perturbations caused by meteorological variations, like those seen in the years 1988 and 1995.

EPA has stated that for an eight-hour standard at a level of 0.09 ppm, it will only consider a form of the eight-hour average of the annual third-highest maximum eight-hour average ozone concentration. The commission believes this position is not justified by sound science. EPA stated, and CASAC concurred, that the form of the standard, as long as it is within the range of 1-5 expected exceedances (or an equivalent concentration-based form) does not provide a significant difference in the amount of risk exposure for the population at large (although all members of CASAC favored a multiple-exceedance based form of the standard). If EPA cannot identify a bright line which distinguishes between a form within the range of 1-5 expected exceedances, this too becomes a policy judgment. Therefore, the factors described above in the discussion about the level of the standard regarding attainability, cost/benefit impact analysis, and flexibility in light of uncertain science also pertain to the decision making on the selection of the form of an eight-hour standard. The commission believes that EPA should select a form which provides for maximum statistical stability.

Some studies indicate that some extremely sensitive individuals may be affected by shorter-duration levels that exceed the 0.09 ppm level. The commission believes that an expanded public notification system, based on improving techniques to predict elevated ozone levels in advance, which EPA discusses in the Pollution Standards Index (PSI) section of the proposal, will provide an adequate margin of safety to those extremely sensitive individuals considering the few times that such preventative measures would actually be required. The commission also supports investigation and analysis of monitors that frequently experience elevated levels of ozone. Given this additional margin of safety, the commission believes that the combination of this form and level of the standard will provide health protection to the public.

Spatial Averaging

The commission supports the concept of spatial averaging because it believes that spatial averaging can provide a better indicator of the population exposure actually experienced within the averaged area. Additionally, a spatially averaged form provides additional statistical stability and accuracy of monitored values. However, the commission believes that a complete analysis of whether the type of spatial averaging being considered by EPA is adequately protective of human health can only be done after further protocols are established to determine the method of conducting spatial averaging.

Furthermore, the commission shares EPA's concern that spatial averaging can only be done in areas that have an adequate monitoring network, and that developing a siting protocol will be difficult. However, the commission believes that spatial averaging, in conjunction with Urban Airshed and other modeling techniques, could provide an effective mechanism for redeployment of the ozone monitoring network and an incentive to states for this redeployment. The commission believes that an expanded public notification system, combined with improving techniques to predict elevated ozone levels in advance, could help provide an adequate margin of safety for extremely sensitive individuals. As stated above, the commission also supports investigation and analysis of the data from monitors and the area around them that frequently experience elevated levels of ozone.

Continuation of the One-hour Standard Until State Implementation Plan (SIP) Approval

If an eight-hour standard is promulgated, the commission does not support EPA's proposal to maintain the current one-hour standard until the SIP for the proposed new eight-hour standard is approved. More often than not, a long period of time passes between when the state has legal authority to implement control programs and when EPA approves a SIP. In many cases, this is of little concern, although it causes confusion in the mind of the public and the regulated community. In the case of the new standards, however, working under an interim policy based on a one-hour standard could impose a significant burden on states and the public, and hamper efforts to move toward attainment of an eight-hour standard.

All states have some mechanism for making control programs enforceable in their state, although each state's mechanism is slightly different. The commission believes that the one-hour standard should cease as soon as states have legal authority to implement and enforce control strategies to move toward attainment of the eight-hour standard and submit a SIP containing those strategies to EPA, rather than waiting for EPA approval of that SIP.

Communication of Public Health Information

The commission supports the continued use of the PSI and EPA's suggestion to revise the PSI to include an expanded warning system. The commission believes that this warning system, combined with the level and form described above, provides important public health information

Mr. MCINTOSH. Thank you very much, Mayor. I notice at the back of your submitted written testimony you've got similar charts for various areas of the country, and I'll make sure that the members of the committee receive those.

Ms. MONK. Thank you. I believe that you will find that the areas for the members of the committee as well as some of my fellow panelists are included in those charts.

Mr. MCINTOSH. Thank you very much. Our next witness is from the New York State Assembly. We appreciate you coming down, representing the northeast region of the country. The Hon. Richard Brodsky.

STATEMENT OF RICHARD BRODSKY, NEW YORK STATE ASSEMBLYMAN

Mr. BRODSKY. Thank you, Mr. Chairman and members of the panel. I'm Assemblyman Richard Brodsky of New York, chairman of the New York State Assembly Committee on the Environment, former chairman of the Committee on Oversight and Investigation. And I share this committee's continuing concern that the legislature act as the thorough check on process, and deal with agencies of the Government in ways to ensure that they obey the law as the law is written by the legislature.

I am here today to address the regulatory impact statement of the EPA with respect to the proposed rulemaking. And my full written testimony goes into this in greater detail. But I will highlight it for you. In developing the document, EPA has inadequately considered the true health impacts and health benefits of the rulemaking. For example, EPA only considered hospital admissions as the indicator of adverse health effects. Emergency department visits, asthma attacks, private physician visits, increased medication use, lost work days and increased frequency of respiratory systems were all not considered by EPA. Those benefits to the people of the Nation and my State need to be considered.

EPA, by its own admission, was unable to monetize some of the very critical health benefits of the proposed rules. These benefits included reduced chronic respiratory damage, premature aging of the lungs, reduced mortality and morbidity from lower fine particle levels, reduced cancer and other health effects. Furthermore, the EPA did not monetize the important benefits to my State with respect to reduced nitrogen deposition in sensitive estuaries, protection of the parks, forests, and ecosystems.

Sulfates and nitrates are often emitted in the form of fine particulate matter. And the RIA failed to quantify the benefits of reduced acid rain deposition in the Adirondack Park, which is the largest public park in the contiguous United States. Over 300 lakes and ponds in that area are losing their ability to support aquatic life. The economic effect of that with respect to tourism is considerable. And the RIA had failed to consider that. It has also failed to consider the economic benefits of ozone and PM controls, which occur from the reduced emissions of sulfur dioxide. Again, the New York State acted in the early 1980's to clean up its own house.

That has left us at some disadvantage at the cost of producing electricity. And the ability of a more national standard with respect to those emissions would enable New York to cease paying the eco-

nomic penalty for its advanced public health concerns. In conclusion, the failure of EPA to significantly quantify the benefits, monetary and otherwise, is of some deep significance.

Mr. Chairman, one of the interesting things that I've been able to learn in the listening today is that there's going to be a regional dispute here. Because part of the problem is that the costs that may be applied to cleaning up this problem are not necessarily going to come from the same reasons that suffer from the effects of these dangerous substances. And it seems to me particularly appropriate that a national forum and standard be set so that the people of my State are not poisoned by people of other States. That takes us back to the debate that has been had by other witnesses today and that we have had within our own legislature.

There are essentially two questions that need to be addressed. The first is, does this stuff hurt anybody? Is it toxic? Are people being damaged by it? What do scientists and doctors, not necessarily informed laypeople, as you and I may be, say about that. I have concluded that the evidence on that point is very, very strong. This stuff is dangerous. You can measure that danger. And people are being hurt by it. That is not necessarily the end of the question even though the law, in refusing to permit cost-benefit at this stage of the process, may indicate that it is the end of the debate.

The next step is this question of cost-benefit analysis. And it is an absolutely fascinating area for public policy debate. We have been asked to come here today to discuss the rationality of the cost-benefit analysis placed before you and the American people. I have tried to do that answer shown in substantial ways how it has not adequately considered the benefits of this proposed rulemaking. I listened with respect to my colleague, the Governor of Ohio. And what I find interesting and somewhat disturbing is that in most cases, the opponents of the rule attack the calculation of costs by EPA as inadequate, but accept EPA's calculation of the benefits without challenge.

Now, if one is going to be skeptical about a Government institution, as the chairman is—and I have been in my chairmanship—then we ought to be skeptical about both ends of the process. When I hear skepticism on one side, I get concerned, as someone charged with protecting the public health of my State. The fact of it is, the benefits to significant numbers of people in my State have not been considered adequately. And if they were, perhaps the opinions of these distinguished colleagues in Government and members of this panel might change.

But even if we rationalize the cost-benefit system, let me suggest that it is a morally repugnant exercise. We have been asked to consider the value of a human life at $4.8 million. We have been asked, according to EPA data, to consider the value of pain upon deep inhalation as anywhere between $1.26 and $28.04. The pain of a cough should be valued under our new system at anywhere between $1.26 and $13.84.

If the forum would permit—and I don't mean to put the gentlemen at a disadvantage—I would say to the people of the State of Ohio, exactly what is the life of a 72-year-old grandfather taking care of a family in New York City worth in monetary terms? And

should the Government of this Nation be involved in that? This is Orwellian. This is a challenge to the notion that there is a value in families that we cannot monetize. We are commoditizing the people of this Nation under this process, and doing so in a way that can only exacerbate the fundamental divisions that we've seen regionally, racially, and at class in our society.

The issue before the Congress and America is, is the stuff dangerous? And if it is, we ought to stop it. And we ought to stop it in the most cost-effective way. But that is the second level of inquiry, not the first one. And I urge those who speak most effectively and outspokenly about the values of families to realize that we are participating in a process that sets the values of families in dollar terms and ways that are morally repugnant to me and, I believe, the American people.

I appreciate, Mr. Chairman, the opportunity to offer this testimony. I would be glad to answer any questions.

[The prepared statement of Mr. Brodsky follows:]

TESTIMONY OF RICHARD L. BRODSKY
CHAIRMAN OF THE NEW YORK STATE ASSEMBLY
COMMITTEE ON ENVIRONMENTAL CONSERVATION

Before the Subcommittee on National Economic Growth, Natural Resources and Regulatory Affairs of the Committee on Government Reform and Oversight

Wednesday, April 16th, 9:30am, 2154 Rayburn Building

Topic: EPA's Particulate Matter and Ozone Rulemaking: Is EPA above the law?

Introduction

The purpose of my testimony is to address the United States Environmental Protection Agency's (USEPA) Regulatory Impact Statement (RIA) for the proposed ozone and particulate matter standards. The RIA has failed to address several significant areas of concern to the people of the Nation, of New York, the Congress, and all interested parties. By raising these issues in this forum it is my hope that a more complete picture of the impacts of the rulemaking can be put in the public record. My testimony will show that the RIA contains serious deficiencies, which should be addressed to fully analyze the costs and benefits of the proposed ozone and particulate matter standards.

Health Impacts

EPA only considered hospital admissions as an indicator of adverse health effects due to ozone. While hospital admissions show the most severe health effects from ozone exposure, there are other indicators that EPA should have taken into account. Other indicators which come to mind are: emergency department visits, asthma attacks, emergency visits to private physicians, increased medication use, lost work days, and increased frequency of respiratory symptoms. According to Dr. George D. Thurston, Associate Professor of Environmental Medicine at the New York University School of Medicine and a leading research epidemiologist on the impacts of ambient ozone on public health,

> [I]t would be a serious mistake to think that counts of emergency hospital admissions resulting from ozone exposure even begin to reflect the much larger scope of the adverse human health effects and the medical costs presently being visited upon.

Thurston highlights the fact that many asthmatic children experience debilitating asthma attacks before they ever reach a hospital. Their suffering is severe but they are ignored by risk assessments that only recognize hospital visits.

There are also inherent limitations regarding the use of risk assessment to characterize environmental hazards. Risk assessment only considers the health outcomes and effects for which data happen to be available. Few data are available for many of the health outcomes which should be considered by risk assessments. Therefore, the risk assessment process will inevitably underrepresent the scope of the health impacts resulting from environmental contamination.

EPA by its own admission was unable to monetize some very critical health benefits of the proposed ozone and particulate matter standards. Such benefits include: reduced chronic respiratory damage and premature aging of lungs; reduced mortality/morbidity from lower fine particle levels from ozone controls; reduced susceptibility to respiratory infection; and reduced cancer and other health effects caused by toxic pollutants. Ozone and PM controls would result in a reduction of air toxics. EPA's analysis fails to include these critical health impacts due to the fact that they could not monetize them.

The fact that EPA failed to monetize the benefit of reduced mortality/morbidity from lower fine particle levels is particularly significant. It seems to me that if EPA were able to quantify this category, it would provide a dramatic increase in the benefit numbers for ozone reductions as a whole. This category includes the entire list of human health and welfare benefits that are quantified for the PM standards.

Short-term exposure to ground-level ozone (smog) can cause respiratory problems, chest pain, and coughing and may worsen bronchitis, emphysema, and asthma. Studies suggest that long-term exposure (months to years) to ozone can damage lung tissue, which could help lead to chronic respiratory illness.

PM-10 includes "large" or coarse particles as well as "small" or fine particles. While both coarse and fine particles can increase respiratory symptoms and impair breathing, fine particles are more likely to contribute to the serious health effects found in a number of recently published epidemiological studies. Health effects associated with PM include premature death, primarily in the elderly and people with heart and lung disease, and respiratory illness in children.

<u>Ecological Impacts</u>
The ozone and PM RIA also fail to monetize such important benefits as: reduced nitrogen deposition in sensitive estuaries, protection of parks, forests and ecosystems, and increased yields of tree seedlings.

Sulfates and nitrates are often emitted in the form of fine particulate matter. The PM RIA fails to quantify the benefits of acid rain eduction due to a more stringent particulate matter standard.

The Adirondack Park is the largest public park in the contiguous United States. It contains six million acres, covers one-fifth of New York State, and is equal in size to neighboring Vermont. Few people realize that the Adirondack Park is nearly three times the size of Yellowstone National Park.

Forty-two percent of the Park is publicly-owned Forest Preserve, protected as "forever wild" the State constitution since 1895. Plants and wildlife abound in the Park, many of them found nowhere else in the State. Uncut ancient forest cover tens of thousands of acres of public land. Someday, all native wildlife, including those extirpated in the last century, such as the cougar, lynx and moose, may live and breed here. But only if we are careful to preserve this invaluable resource.

The USEPA estimates that more than 300 lakes and ponds in the Adirondacks are already too acidic to support most aquatic life. EPA, in November 1995, issued a report entitled *Acid Deposition Standard Feasibility Study Report to Congress"* which showed that more than half of the roughly 3,000 lakes and ponds in the Adirondacks could be too acidic to support fish and other aquatic life by 2040. EPA's report also showed that acidic compounds that are deposited in the Adirondacks are to a large extent emitted by utility plants located in the Midwest. I believe that implementation could dramatically reduce the number of acidic lakes in the Adirondacks by the year 2040.

Scientific analysis indicates that nitrogen as well as sulfur deposition are important contributors to chronic and episodic acidification of surface waters. The reduced ozone and PM standards may help to slow down the saturation of Lakes in the Adirondacks. Furthermore, NOx plays a large role in acid shock. Acid shock is caused by the build up acidic chemicals in winter snow pack. In spring when the snow melts, these chemicals are released all at once into the streams causing a dramatic drop in PH. This impact has serious consequences for fish reproduction. While these standards will have a beneficial effect in the Adirondack Park, still more needs to be done at the Federal level to solve the problem of acid rain.

Control Costs

EPA's estimate of control costs seems to be overstated. The costs of implementing the lower standards were double counted because the ozone and PM analyses were conducted separately. In many cases there will be significant overlap in the cost of implementing appropriate control strategies.

Economic Benefits

The ozone and PM RIAs fail to mention the economic benefit to the Northeast of reducing emissions of sulfur dioxide (SO2) and nitrogen oxides (NOx). The power sector in the midwest has cleaned-up far less than the energy producing facilities in the Northeast. The older energy producing facilities were exempted from the tightest

regulations of the Clean Air Acts of 1970 and 1977, largely based on the belief that these plants would retire and be replaced by newer facilities. In the 1980s the Northeastern States could no longer wait for Congress to more stringently regulate this industry. In 1984, the State Acid Deposition Control Act became law in New York State. Millions of dollars have been spent upgrading and cleaning up the State's older facilities. In 1990 Clean Air Act Amendments, the onus was once again placed on the Northeast to control its sources. All New York Sources are subject to Reasonably Attainable Control Technology (RACT) for NOx. This uneven playing field causes New Yorkers to pay higher electric bills, thus placing the State at an economic disadvantage with other States. As the electric industry is deregulated, there is a perfect opportunity to create equivalent environmental standards for all electric generators equivalent to those met by new plants. A level playing field will benefit New York's economy, its environment and the health of its citizens.

In order to meet the proposed ozone standard, it is clear that substantial reductions of ozone precursors (NOx and hydrocarbons) will be needed. While past efforts have focused on hydrocarbons, the most recent and best scientific research suggests that much more emphasis on NOx reductions is needed in the future. In order to meet the proposed fine particulate standard, it is clear that substantial reductions of precursor emissions (SO2, NOx, and organics) will be necessary. In the eastern United States, research indicates that SO2 is far and away the largest culprit in the formation of fine particles. NOx also plays a significant role.

Without a doubt, one economical and timely step will produce significant reductions of both SO2 and Nox; cleaning up the existing fleet of power plants, primarily in the midwest. Power plants are responsible for 80 percent of national SO2 emissions and for 33 percent of national NOx emissions. These two pollutants are implicated in both ozone and fine particle formation, as well as a host of other health and environmental effects, including acid deposition and forest decline.

Power plant SO2 and NOx reductions are highly cost-effective. While we struggle to ratchet down emissions from smaller industrial boilers or place additional controls on automobiles and light trucks, controls on the power industry would be far more effective at a fraction of the cost. Controls on power plants can also be achieved quickly. For instance, cleaning up the nation's fleet of diesel engines, a measure which I strongly endorse, is a twenty
year project; cleaning up its power plants can be done in less than half the time.

Conclusion

If EPA were to monetize and quantify the health and welfare, ecological and economical benefits that I have outlined above, the case for lowering the ozone and PM standards would be virtually impossible to dispute. However, even with the aforementioned shortcomings, EPA has still made an excellent case for tightening the ozone and PM standards.

I think that a cost benefit analysis of regulations aimed at reducing environmental contaminants will always be biased toward the cost side of the equation. Historically, analysts have often overpredicted costs and underpredicted benefits of air pollution control. Additionally, cost-benefit analysis tends to add more uncertainty to that already inherent in the standard setting process. Projecting costs and benefits into the future adds substantial analytical uncertainties. It is almost impossible to predict future innovations or market trends that could affect costs. Additionally, as I have mentioned above, most of the health issues are not readily monetized.

At some point, legislative bodies must be willing to trust the regulatory agencies charged with protecting the public health. I know, as well as any elected official, just how difficult this can be. Also, at some point regulatory decisions must be made even in the absence of 100% certainty. As a society, we suspected that tobacco was a serious health threat long before we could make a causal link between cigarette smoking and adverse health effects. Similarly, I think that we all know that lower ozone and PM emissions will have a significantly positive impact on our health, but more significantly our children's health.

The fact that the RIA overstates costs and understates benefits should not be used as an excuse not to move forward with the proposed standards. Even in its inadequate condition, the RIA is more than sufficient to support the standards.

Mr. MCINTOSH. I appreciate you coming, Mr. Brodsky. We'll get to questions with the rest of the panel in just a moment. Our final witness on this panel is State Senator Richard Russman, from New Hampshire. My vice chairman apologizes for not being here to greet you, but asked me to do so. Welcome to this panel. I appreciate you taking the time to come down here and testify. Senator Russman.

STATEMENT OF RICHARD RUSSMAN, NEW HAMPSHIRE STATE SENATOR

Mr. RUSSMAN. Thank you, Mr. Chairman, and members of the committee. I was beginning to think that between the milk causing asthma and the fertilizer causing particulate problems, we'd have to shoot all the cows. But hopefully that won't be necessary. My name is Richard Russman. I'm a State Senator from New Hampshire. And I thank you for letting me come before you today.

Myself and New Hampshire enthusiastically support the rules on ozone and particulate matter proposed by the EPA. And we believe that they are following a law, which is the Clean Air Act statute on health-based standards. We're satisfied as a State. And we think that the science that it's based on is good science. I've had the opportunity to talk with some of the—while I'm a Republican, I've talked this over with the Democratic leadership before coming down here. And they would share my endorsement of the standards at the same time.

I do have to disagree with a recent argument that was recently put forward by the National Conference of State Legislatures—and I believe you got a letter from them—I am the immediate past chairman for NCSL's committee on the environment—saying that EPA has not sought input or considered the role of the States. I think since the proposal has come forward, the EPA has made diligent efforts to include all the affected parties and have been developing strategies to implement the rules when they become final. I think EPA has worked through the Federal Advisory Committee Act, and has established working groups on ozone, particulate matter, and regional ozone transport to provide advice to EPA and the States which are charged with implementing the rules, as it should be.

EPA has wisely expanded the membership of the working groups and has extended the comment period and the final deadline for these final rules. And I will see that the FACA membership list is submitted to you for the record. It's extensive. Input from working groups and the scientific advisory committee has been extensive, as have been the justifications put forward by the EPA. I believe that this administration has worked to reform the regulatory process and done a good job.

They have also made a strong case for the benefits of these rules, which I respectfully would remind you are health-based only. The costs can be and will be considered further in the implementation stage. And that is not to say that there are those who have concerns about those. And they're probably legitimate concerns. But they will be addressed. Being from New Hampshire, I'm worried about the continuing effects of ozone on our region. Agriculture and

forestry are beginning to suffer—as much as 10 percent loss for some crops.

This is bad for the American economy in terms of consumer goods and tourism. These are quantifiable benefits that are not fully accounted for in the rule. I would even go so far as to say that I think these rules will be good for business. And I think they will spur the economy. Historically, when the Clean Air Act was first suggested, there was a hue and cry sent up. And if you look at the record, our economy is doing better now than it's ever been doing.

So, certainly there is some merit to having some of these rules in place. More importantly, we can't overlook the mortality and the health impacts of continuing to expose our fellow Americans to ozone and particulate matter. And I think we can all agree on that particular point. It would be difficult to quantify the value of healthy air in terms of what it means to various citizens that breathe it. We can debate the implementation strategies. And I'm sure we will. And I'm sure we'll debate the best way to achieve the attainment.

But the Clean Air Act is clear about the standard being health-based. And it should be. The question that we had before us today was, is EPA above the law. I don't think that they are. And I think that EPA is doing its best to uphold the law and to protect the health of the American people. And Hew Hampshire would certainly urge the Congress to be supportive in their particular effort. New Hampshire thanks you. And certainly, I'd be happy to answer questions if I can.

[The prepared statement of Mr. Russman follows:]

Testimony of Senator Richard L. Russman of New Hampshire

Before the Subcommittee on National Economics, Growth, Natural Resources and Regulatory Affairs

Committee on Government Reform and Oversight

Wednesday, April 16, 1997

Mr. Chairman and members of the subcommittee, my name is Richard Russman, and I am a state senator from New Hampshire. I want to thank you for this opportunity to testify about the clean air standards for ozone and particulate matter that have been proposed by the Environmental Protection Agency (EPA).

As you know, New Hampshire is one of the northeastern states that is affected by ozone transport, so we have a very strong interest in seeing action taken to address the emission of precursors that lead to ozone formation. The respiratory problems caused by excessive ozone exposure will continue to plague the citizens of my state, not to mention the health of natural resources, if action is not taken. In addition, I believe the people of New Hampshire agree that the threat of fine particulate matter must be addressed, as called for by the American Lung Association and our governor, the Honorable Jeanne Shaheen.

I understand that this subcommittee is concerned about the process undertaken by the EPA in promulgating rules to address ozone and particulate matter problems. Let me say at the outset, I am a proponent of the proposed rules and believe the EPA is going about the process of issuing final rules in a responsible manner. These standards must be established by relying on health based criteria only; that is very specific in the Clean Air Act.

Recently, the National Conference of State Legislatures (NCSL) sent a letter to Ms. Mary Nichols, Assistant Administrator for Air and Radiation at EPA, citing numerous problems with the issuance of the proposed rule and compliance with federal statutes and executive orders. I disagree with the premise and findings of that letter and, as the core of my testimony, I will explain my reasoning to the members of the subcommittee today.

First, let us remember that this is a proposed rule - not final. Many of the arguments raised against the rule are based on the requirements necessary when an agency promulgates a final rule. For that reason alone, many of the arguments raised by the NCSL have no validity.

Second, many opponents criticize EPA for not seeking outside opinions or consultation with the states. Nothing could be further from the truth. Since February, 1994, EPA Administrator Browner has been seeking the advice of affected parties on the issuance of these rules. Under the authority of the Federal Advisory Committee Act (FACA), EPA established working groups to address ozone, particulate matter and regional haze problems. These working groups depend upon the opinions of state and local governments, industry, small businesses and other interested parties to formulate strategies for attainment.

These strategies are designed to help states with implementation programs, which are solely a state and local government responsibility. I do not believe the EPA simply is passing the buck when they claim they are not demanding specific regulatory activities. As you know, the EPA grants authority to the states to implement the rules as they see fit through a state implementation plan. The NCSL recognizes this in its letter to the EPA, stating that "implementation of the Clean Air Act is being carried out by state and local governments."

I don't believe it would be a stretch to say that the Congress and much of the country would be up in arms if the EPA directed the specific actions that states and localities must take. States have asked for and been given authority to implement many federal regulations. This is one of those cases where granting primacy (regulatory authority) has and should continue to work.

In addition to bringing in the views of affected parties through the FACA process, EPA extended the comment period on the rule for 21 days. That extension has allowed more than 40,000 comments to be received via the mail and nearly 18,000 phone and electronic comments to be delivered.

The date for issuing the final rule also was extended after a request by the Administrator. It is important to note that the opponents of the rule were the primary constituency asking for that extension. In response to this, Ms. Browner returned to the judge who issued the initial ruling on particulate matter and petitioned for the delay.

Finally, since issuing the proposed rules, EPA has expanded the representation on the FACA working groups to include more representatives from local governments and small businesses. These actions were not required, but were carried out by the EPA to ensure adequate input from those expressing most

concern. Not once in their letter does the NCSL recognize these ongoing efforts.

With the chairman's approval, I would like to submit for the record the membership of those working groups so that members of the committee will have an idea of the access that various interests have had to the rule making process.

One concern raised by the NCSL letter that I would like to reinforce to you is the issue of funding. We all agree there will be some costs in implementing these rules, although those costs are several years away. With this in mind, the concern about section 105 funding, which provides technical and financial assistance to states, is one that is universal among states. Realizing the role that states and localities play in implementing the nation's environmental laws, I hope the Congress will see the wisdom in providing adequate funding to the EPA to assist in this implementation.

While I am not a member of President Clinton's party, I would like to state that I commend him for the efforts he has made to reform the regulatory process. Since 1993, with the issuance of Executive Order 12866, this administration has made a concerted effort to streamline regulations and to provide justifications for rulemaking. While cost benefit analyses are not a criteria of the Clean Air Act, the EPA complied with the Executive Order and provided the necessary justifications, including analyses of costs and benefits, to the Office of Information and Regulatory Affairs (OIRA) at the Office of Management and Budget (OMB). Your committee and the entire Congress has access to these documents, which I suspect are more thorough than documentation for any other rule the EPA has ever promulgated

In addition to administrative efforts to improve regulatory efficiency, the Congress passed and the President signed numerous pieces of legislation, specifically the Small Business Regulatory Enforcement and Fairness Act (SBREFA), that create obligations for the agencies in establishing rulemaking and give the Congress on oversight role before major rules can go into effect.

I believe this is an appropriate role for the Congress to play, and I think that is one reason that we are having this debate today. However, I do not believe the Congress should try to inject false arguments into the debate when the Clean Air Act is very specific - rules are to be promulgated following health based standards, which are to be reviewed at least every five years. In this case, the statute has been backed up by the courts regarding standards for particulate matter.

The regulatory impact analysis prepared by the EPA attempts to quantify benefits that sometime cannot be quantified, yet the estimated benefits far outweigh the overall costs. The *Federal Register* notice on the proposed rule

states clearly that the regulatory impact analysis for the rules "will be available at the time the implementation strategy is proposed." I fully expect the analysis to be available and comprehensive when the final rule is issued.

The EPA has focused on health and the primary standard. I have come to the realization that the secondary standard, welfare, might provide significant additional benefits if those were quantified. Regardless, efforts to meet the primary standard also will benefit the welfare of Americans.

As you know, vegetation is harmed by ozone exposure. Unlike most susceptible human populations, it has few means of staying indoors. Agriculture and tourism continue to be the major economic indicators for many districts in this country represented by members of this committee. I am disappointed to see the agricultural community oppose the rule because increased incidences of high ozone exposure have reduced some crop outputs by more than ten percent. Indeed, CASAC unanimously recommended that EPA adopt a secondary standard for ozone more stringent than the primary standard.

In addition, forest ecosystems from the southern Appalachians to the northern Adirondacks are threatened by high levels of ozone. Many states promote their natural areas for tourism, yet these beautiful mountains so far removed from urban settings are threatened by the precursors of ozone and the resulting "burn" that occurs at higher elevations.

The benefits of protecting agricultural production (including timber) and tourism economies will be well worth modifying emissions standards for all the communities that depend upon these natural resources to support their economies. These impacts and benefits must be considered in any discussion of costs.

I also would like to submit for the record, with the chairman's approval, the recent findings of the Northeast States for Coordinated Air Use Management. These findings back up the need for more stringent ozone standards.

In the case of standards for particulate matter, I believe the benefits will be substantial. I find it distasteful to try to quantify the value of a life, let alone trying to do it for 15,000 individuals. The premature death caused by particulate matter and the debate surrounding the impacts reminds me of the debate about cigarette smoke. Scientist after scientist testified that smoking did not cause lung cancer and that epidemiological tests could not show causality. Just as we reached a clear indication with cigarette smoke, the data now supports the link between particulate matter and respiratory illness.

Since the 1970's industry has tried to analyze the costs of complying with environmental regulations. I don't believe it has ever made accurate estimates.

Will there be some costs in implementing these regulations? Yes, and the EPA has made the best estimates available given the uncertainties of how the rules will be implemented at the local level.

In establishing the health based standards, EPA should not consider costs. In considering implementation strategies, EPA should and has consulted affected parties to consider costs, even before they have issued a final rule.

I will remind you of the excessive costs estimated by the utility and industrial sector during the 1990 Clean Air Act debates. We all know that those horrific scenarios did not and will not play out. Nor has the American economy gone down the tubes, if you will excuse the expression. On the contrary, technology has expanded to meet industrial demand, and states have found innovative and cooperative ways to meet attainment standards.

We may not be able to reach 100 percent attainment compliance in the next ten years, but the effort to achieve those standards will be of value to every man, woman, and child in this country. That is a significant benefit.

In conclusion, Mr. Chairman, you ask if EPA is above the law. My answer is no; they are complying with the law and trying to "protect the public health with an adequate margin of safety" as directed by the Act. We have in place a regulatory system that is more scrutinized today than at any time in recent history. I believe that is a good thing. But I also believe that when agencies are following their mandates, they should be given the necessary support to implement the laws the Congress has passed.

That concludes my testimony. Thank you again for the opportunity to particpate, and I will be happy to answer any questions from members of the committee.

Mr. MCINTOSH. Thank you very much, Senator Russman. I understand that Mr. Waxman has another engagement. And so, I'll yield my place of questioning, if you want to take your 5 minutes, and then I'll go after you.

Mr. WAXMAN. Thank you very much, Mr. Chairman. I appreciate this courtesy to me. Because I do have a conflict in my schedule. And I thank all the witnesses for your testimony today. And I wanted to direct my questions to Governor Voinovich. Governor, this morning we heard from Dr. Munzer, who is a lung specialist, and he told us, representing the American Lung Association, that he deals with kids who have asthma attacks triggered by the levels of ozone that are lower than our national standard.

We have overwhelming statements from all these scientific experts that there's a connection between ozone and particulates and asthma attacks. And, of course, an asthma attack is a pretty awful thing for a child—for anybody—but for a child it can be life threatening. Many of them end up in the emergency rooms of the hospitals. Do you dispute that there is a connection between ozone and particulates and asthma attacks?

Governor VOINOVICH. No. First of all, I think that the head of our health department, Dr. Peter Somani, has looked at this and reviewed it, along with our Environmental Protection Agency. And Dr. Somani basically said that the proposed new standards will not have any measurable impact on the health of the people in the State of Ohio.

Mr. WAXMAN. Let me ask you——

Governor VOINOVICH. And even——

Mr. WAXMAN. Excuse me, Governor.

Governor VOINOVICH. And even EPA has said it will have little or marginal impact on ozone.

Mr. WAXMAN. This is our chance. You're not being fair to me. You had your chance to testify. This is our chance to ask you questions.

Mr. MCINTOSH. But Henry, let him answer the question specifically.

Governor VOINOVICH. Let me answer the question.

Mr. WAXMAN. My specific question is do you doubt that there is a connection? Leave the rule aside. Leave the cost aside. Do you doubt that there is a connection between air pollution and asthma attacks in kids?

Governor VOINOVICH. The fact of the matter is that I'm sure that there is some impact. But the question is whether or not increasing the ozone standard is going to have a measurable impact at all on the question of asthma. And even the EPA has revised its predictions in terms of the impact on public health. As a matter of fact, Congressman Waxman, 53 million Americans, they admit, won't even benefit from this because they'll never be able to attain the standards.

Mr. WAXMAN. Governor, 1,350 health professionals have written a letter to the President saying it's important that we go forward with their new standards in order to protect the public. And 27 of the Nation's most distinguished air pollution health effects experts

are urging President Clinton to go ahead with EPA's proposal. And I want to put into the record without any objection that we have that statement so that the people reading this transcript will see it.

[The information referred to follows:]

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March 12, 1997

President Bill Clinton
The White House
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear President Clinton:

We are doctors, scientists, professors, clinicians, researchers, and other health care professionals from around the nation who are concerned about the serious public health threat posed by ozone and particulate air pollution.

Numerous medical and scientific studies indicate that current allowable levels of air pollution contribute to respiratory disease and early death. Air pollutants also are linked to medically significant respiratory symptoms and other serious health consequences. It is time our nation take steps to prevent further harm and protect our citizens from unhealthy air.

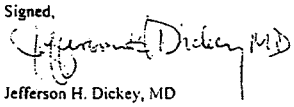
The United States Environmental Protection Agency's (EPA) proposal to strengthen the National Ambient Air Quality Standards for particulate matter and ozone is a positive step forward. Tens of thousands of hospital visits and premature deaths could be prevented each year nationwide by implementing more stringent air quality standards for these two pollutants. Some estimates, however, indicate that under EPA's current proposal millions of people could still be exposed to harmful levels of particulate pollution. Therefore, even stronger standards would provide additional protection for all our nation's communities, especially the most vulnerable.

If your Administration does not push for protective air quality standards, millions of Americans will continue to suffer the consequences of breathing polluted air. People who live in pollution "hotspots" would not be protected. Children and the elderly will continue to run the risk of developing chronic lung disease. And those already afflicted with heart disease, asthma, and emphysema will experience little relief. This is unacceptable.

Mr. President, we urge you to direct the EPA to adopt air pollution standards that are at least as protective as those proposed, and to oppose any efforts to weaken current standards. This is the most important environmental health decision of your Administration, one that will affect public health for decades to come.

Please listen to us in the health community on this crucial public health issue.

Signed,



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cc: Carol Browner, Administrator, U.S. EPA

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Chuck Franklin, MD
Cedar Hills Family Clinic
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January 10. 1997

Mr. William J. Clinton, President
The White House
Pennsylvania Ave
Washington, DC 20500

Dear Mr. President,

We are doctors, scientists, professors, clinicians, researchers, and other health care professionals who share a serious concern about the widespread public health threat posed by air pollution.

The final decision on the Environmental Protection Agency's November, 1996 proposal to revise the federal air quality standards for particulate matter and ozone is likely to be the most important environmental health decision of this Administration and will affect public health for decades to come.

Exposures to these two air pollutants have been linked to medically significant adverse health consequences. Health studies conducted in the United States and around the world have demonstrated that levels of particulate and ozone air pollution below the current U.S. national air quality standards exacerbate serious respiratory disease and contribute to early death.

A large body of scientific and medical evidence clearly indicates that the current National Ambient Air Quality Standards for particulate matter and ozone are not sufficiently protective of public health Tens of thousands of hospital visits and premature deaths could be prevented each year by more stringent air quality standards for these two pollutants.

The standards established by the U.S. Environmental Protection Agency must protect the health of all Americans, and especially the most vulnerable-children, the elderly, people with asthma and those with chronic heart and lung disease.

Please listen to the medical and scientific community on this vital public health issue.

Sincerely,

George D. Thurston, ScD
Associate Professor
Department of Environmental Medicine
NYU School of Medicine
New York, NY 10016

Attachment: List of Letter Co-Signers

Co-Signed by:

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Mr. WAXMAN. There are two issues: whether there's a connection between air pollution and asthma and heart disease and these kinds of serious medical consequences.

Governor VOINOVICH. Risk.

Mr. WAXMAN. The second issue is what is a standard to protect and prevent—protect public health and prevent some of that.

Governor VOINOVICH. Mm-hmm.

Mr. WAXMAN. And then the third issue is what costs are going to be incurred and how to evaluate that. Now, just so I don't look like I'm a partisan, I've been involved in clean air for a long time. And I remember Governor Celeste, the Democratic Governor of Ohio, coming and testifying to us that if we control the pollutants that cause acid rain, it's going to be an extraordinary cost. In fact, what the electric utilities were saying at the time, that acid rain allowances would cost between $1,000 and $1,500. We went ahead and adopted the law, and it ended up costing $100.

So what I'm concerned about is that we not trivialize what happens to kids with asthma. They end up going to emergency rooms. Sometimes it's life-threatening, because they can't breathe. A lot of kids with asthma live in the State of Ohio. And there's a cost to them if we don't get a standard that will protect their health. Once we've got a standard that will protect their health, then we can talk about the reasonable timeframe and the cost. And we ought to be more realistic sometimes on those cost estimates. And I want to give you a chance to respond.

Governor VOINOVICH. My only comment is that there is disagreement among the experts in terms of the impact of particulate matter. And there's a difference in terms of a new standard and its impact on public health. That's something that's going to be debated by the experts. The man who headed up the science review committee for the Environmental Protection Agency when they did this, George Wolff, indicated that it was his opinion and many others' that what some of these other doctors have testified to is really—they disagree.

Mr. WAXMAN. But if we find—notwithstanding the disagreement—that the overwhelming evidence is for a standard that's going to be more protective of the health of people, and especially kids with asthma, you're not arguing that we shouldn't try to prevent the asthma attacks and disease consequences from air pollution?

Governor VOINOVICH. I think we should. But I just talked to the head of our Environmental Protection Agency yesterday—and maybe, Mayor Monk, you may have some information to shed on this—but he said that in spite of the fact that we have reduced ozone dramatically in this country, asthmatic attacks are on the rise in the Nation. And the issue is what is it that is causing the increased asthma among the American public. So I think there are some real differences of opinion here.

On the particulate matter, I think even the EPA has said, "We need more information." They had asked for another $26 million to study the health impact of particulate matter.

Mr. WAXMAN. Well, Governor, I understand what you're saying—that there are some people that have a difference of opinion. But we've heard from a doctor this morning who has personal experi-

ence in treating patients. And he has seen the consequences. And he has looked at the science. And he's reached a different conclusion. And I'm just reminded of all those years I had tobacco executives come in and tell us, "There's really no connection between cigarette smoking and cancer or heart disease. There may be more of a circumstance incidence of it. But we shouldn't jump to conclusions. We should wait until the final scientific nail is pinned down." At some point we got to believe the scientists and not argue that the issue is always open.

Governor VOINOVICH. But you do agree that you need to look at risks and benefits. You were there at the White House when the President signed the amendments to the Safe Drinking Water Act. And the things that we tried to do in that was eliminate mandates that didn't make sense in terms of the technology that was available. We paid attention to requiring people to do things that they really didn't need to do, and got into risk benefit. And I think that's what this is about. This is not about somebody being worried about—I'm concerned as much about asthma as you are, and the health of our people. On the other hand, I also have to look at the impact that this is going to have generally on our people.

Mr. WAXMAN. Well, those impacts are awfully dangerous.

Governor VOINOVICH. Today, you said the acid rain provisions didn't hurt. Yes, they did hurt. We had 16,000 miners in Ohio. We had 450 coal mines. Today we have 4,000 coal miners who are in business in the State of Ohio.

Let's look at our urban areas. We've been trying to do everything that we can. And you've supported legislation to try and revitalize our urban areas and to move people off of welfare and on to jobs.

When you're in non-attainment in a place like Cleveland, OH where we fought for years to bring ourselves into attainment, that casts a pall over your economic development opportunities. It doesn't encourage people to stay in cities or to be attracted to cities. And one of the things that we have to realize is—in my State, for example—one of the greatest concerns that we have is urban sprawl and the movement into the green areas. Part of the reason why businesses are moving out and are usurping green area and not using the infrastructure that's in place, is because some of the very things that we've done on the national level—we believe that this is going to be harmful.

I mean, the President has got empowerment zones on one hand, trying to help areas. You get in non-attainment in Cleveland, Youngstown, Columbus, and the rest of our urban areas in our State, that's going to hurt jobs. And when those people are out of work, they can't afford health care.

Mr. WAXMAN. Governor——

Mr. MCINTOSH. The time——

Mr. WAXMAN. There are jobs that are created by this, as well. But what you want to do, and what we all want to do, is set a standard that's really in protection of the public health, and not eliminate the standards and say, if there are no decent standards, we're in compliance. We want a compliance with standards that are protective of the public health, and then look at the most cost effective way to accomplish that, not to say in the first instance, we're not going to care about those standards, even though those stand-

ards may well prevent a lot of people from getting sick, which is a real cost, as well.

Thank you very much, Mr. Chairman. I appreciate, Governor. We do have a dispute, and we'll continue to talk about it.

Mr. MCINTOSH. Thank you, Mr. Waxman.

Ms. GOLDING. Mr. Chairman, I apologize for interrupting. I just wanted to let you know that I'm going to have to leave in a couple minutes. And I just wanted to thank you for the opportunity to testify.

Mr. MCINTOSH. Thank you very much, Mayor. We may have some additional questions for you, which I'll ask the panel if we can submit them in writing to you. I appreciate you coming all this way to do that.

Ms. GOLDING. Thank you.

Mr. MCINTOSH. Using my 5 minutes, Governor, you should know also that in the same panel we had an expert from the trauma doctors. And he was asked point blank, "Do you support these standards as a way of helping your patients who suffer from acute asthma?" And he said no, that, as you pointed out, we all want to help asthmatics. But do these standards do the job? He thinks they are inadequate and misdirected. Now, the Washington Post, in an article that come out yesterday, points out that the primary cause, they now think, with asthma, does not have to do with ambient air pollution, but has to do with indoor air, dust and mites and other causes.

Mayor Monk pointed out that in her case it has to do with milk. One of the things that, when we're forced to ask the question, do you want to help the people with asthma, we've got to respond and say, of course. But are we really doing this in the rulemaking. The experts are telling us, including, as you mentioned, Dr. Wolff, that the proposed standard does not significantly help asthmatics, and yet would impose tremendous costs.

One of the things I wanted to ask you about is that, in your opinion, do you believe that EPA has fully complied with the requirements to consult with State and local governments and to do the economic and scientific analysis required under Federal law in order to try to determine whether this standard really does provide the benefits that it's purported to and what the costs are?

Governor VOINOVICH. I think the only complaint that our people have is—No. 1—that they didn't have enough time to respond to the 1,000 or—what is it?—1,600 pages of proposed regulations. And we did appreciate the additional time. But we could have used more time so that we could do a better job of responding to those proposed regulations.

I think the other thing is that they have not made available some of the information that they had, so that it could be reviewed by other people, outside people. For example, it was just inadvertent that they found out that their projected health benefits were not what they had originally projected. Somebody was reviewing the material and came back and said, "Hey, we blew it on this. And it's not as much as what we said it was going to be."

Mr. MCINTOSH. Would you recommend that Congress have EPA start over and fully perform those analyses?

Governor VOINOVICH. Well, I don't know if I would recommend that they would start over. But I think that they ought to look at some of the criticisms that have been leveled, and perhaps remedy those criticisms. I think, frankly, that Carol Browner and company did the best that they could do under the circumstances in terms of this issue. In other words, there are things that they haven't—they could have made it a lot better. More time, more sharing of information, and that type of thing. So, I wouldn't say start from scratch. I would say, take what you've got, acknowledge——

Mr. MCINTOSH. Take the time to do it correctly?

Governor VOINOVICH. Acknowledge the areas where people have legitimate criticisms, and build on that. But I don't really think that that will matter a lot. I think that Carol Browner has made up her mind that she's going to institute these new regulations. I spent an hour and a half with her with a delegation from Ohio. And there's no question that she's made up her mind. And I'd like to make one other comment, if it's all right with you.

Mr. MCINTOSH. Yes.

Governor VOINOVICH. In response to the folks from New York and New Hampshire. Our industries in Ohio have spent more than $5 billion on capital costs since 1972 to control the primary pollutants regulated by the Clean Air Act. Our public utilities have spent $3.7 billion on air pollution controls through 1995. That's more than the expenditures of utilities in New York, New Hampshire, New Jersey, Vermont, Massachusetts, Maryland, Maine, Delaware, Connecticut, and Rhode Island. And I would contend, Mr. Chairman, that beyond the health issues that are here, is an economic issue.

And that is that many of our States have come into attainment. As a result of our coming into attainment, frankly we're more competitive than other areas in the country where they are not in attainment. Because businesses don't like to locate in areas where there is non-attainment. In addition, you are talking about retail wheeling one of these days. It certainly is a very, very live subject in the States. And one of the things that also is behind this is that many of the utilities in the northeastern part of this country are frightened to death, that when we get into retail wheeling, because of the fact that they've got some real problems in terms of costs, they will not be as competitive as utilities that are in our part of the country.

So there's an economic issue that's here, too. It's the same thing with the acid rain provisions of the Clean Air Act. I mean, the people that you're pushing that were from the northeast and the western coal interests. So, there's more to this than appears just on the surface in terms of some of these debates that are going on today in this country.

Mr. MCINTOSH. Thank you. I agree with you fully, that there's a hidden agenda at work here. Let me ask Representative Schoenberg, is it correct that even though the Illinois House has urged EPA to evaluate the economic and public health impacts of its PM and ozone proposals and to identify unfunded mandates that are a result of those proposals, EPA has not complied with the requirements of the Unfunded Mandates Reform Act?

Mr. SCHOENBERG. That seems to be the position that the State is taking. I wish to add that the position of the State of Illinois and the city of Chicago, which is the largest metropolitan region within the State, are strikingly similar in this regard, and that this is an issue in Illinois which actually crosses the partisan divide, where we do have significant consensus on this matter.

Mr. MCINTOSH. Thank you. My time has expired. Mr. Sanders, do you have questions?

Mr. SANDERS. Yes. Thank you very much, Mr. Chairman. For the record, I would appreciate unanimous consent to place in the record an article from the Cleveland Plain Dealer of March 2, 1997. I know Governor Voinovich mentioned the support that he's getting from Ohio newspapers. There's at least one editorial writer in the Cleveland Plain Dealer who does not agree with you. And he states, "Like many people opposed to the latest proposed clean air regulations, Governor George V. Voinovich is busily spreading this information about them." So I'd like to put that into the record.

[The article referred to follows:]

THE CLEVELAND PLAIN DEALER

March 2, 1997

It might help to clear the air of misinformation

Like many people opposed to the latest proposed clean-air regulations, Gov. George V. Voinovich is busily spreading disinformation about them.

The governor came by our office recently to argue that the regulations, proposed late last year by the U.S. Environmental Protection Agency, are based on unsound science and that adopting them would cripple the state's economy. He did so with all the considerable sincerity of which he is capable, and I have no doubt he firmly believes what he said.

Jean Dubail

But the facts don't back him up.

Take the argument over science. An Ohio EPA "fact sheet" distributed during our meeting contains the following statement about a proposed standard for microscopic bits of dust and chemicals known as fine particulates: "Scientists have not established a direct link between fine particulates and health problems."

Half-true, at best. The way fine particles do their damage in the lungs is not well understood, but that's not the same thing as saying they aren't harmful, for which there is considerable evidence. In fact, the EPA estimates that such particles contribute to 40,000 deaths a year — and some scientists believe doubling that figure would be more accurate.

That's why 19 of the 21 members of a scientific advisory panel that reviewed the federal EPA's evidence for the proposed standard — a panel whose chairman is George Wolff, chief scientist for General Motors — agreed that one ought to be established.

As Wolff wrote in a letter to EPA Administrator Carol Browner, a number of panelists agreed "there are strong reasons to believe that [fine particles are] at least as important as [larger particles, already regulated] in producing adverse health effects."

Panel members could not agree, however, on what the standard should be. Four members endorsed the EPA recommendation, seven recommended a somewhat higher standard and eight declined to specify.

This conclusion, too, has been misrepresented by opponents of the new standards. The authors of an op-ed article in the Wall Street Journal reported it this way: "Only four of the 21 members supported EPA's proposed standard for particulate matter." The fact that 19 members supported adoption of *some* standard went unmentioned.

The Ohio EPA's fact sheet similarly mischaracterizes the advisory panel's finding that lowering the standard just four one-hundredths of a percentage point would not produce a statistically significant effect on human health.

The Ohio EPA says this means there is "no scientific justification" for moving ahead. But what the advisory panel actually said is that there is no "bright line" between safe and unsafe levels of ozone, because even the tiniest amounts are capable of causing some reaction in the lungs. In other words, *any* level of ozone is potentially harmful. If you ask me, that's a better argument for lowering the ozone standard to zero than it is for keeping it where it is.

What all of this shows is that the opponents of stricter clean-air standards — including business and industry types, public officials like Voinovich and the usual conservative ideologues — are more interested in muddying the scientific waters than clearing them.

This is, sad to say, easily done. When a Senate s committee met last month to hear expert views ab the proposed regulations, scientists linked to affec industries dutifully cast doubts on key points. That abled GOP senators to throw up their hands thea cally and declare it unwise to act without — guessed it — further study. Scientists in favor stricter regulations got a disdainfully skeptical rec tion.

"It was cordial, but not very receptive to hear what I had to say," said George Thurston, a New Y University professor of environmental medici "They weren't really interested in getting informat out of me. They were interested in undermining value of my work."

Discrediting scientists of Thurston's stature is portant to the opponents' disinformation campaign. not only wrote key studies of air pollution's effects health, but arranged for nearly 30 top researchers the field to write President Bill Clinton, urging him forge ahead with stricter standards.

I'm not arguing here that we don't need to learn m about what air pollution does to our health, or there are not a number of uncertainties on key qu tions. Nor is the U.S. EPA, which has asked for millio of dollars to pay for further research.

All I'm saying is that the people telling you we do know enough to act have said the same thing 100 tim before — every time, in fact, a new environmental r ulation was proposed.

Each time, however, we pushed ahead, acting what science could tell us at the time. As a result, quality of our air and water has vastly improved. If had listened to the Voinoviches of the world inste we'd still be peering through the haze of dirty air as t Cuyahoga River burned.

Dubail is an associate editor of The Plain Dealer's editorial pages.

Governor VOINOVICH. Is that—may I ask a question?

Mr. SANDERS. Yes.

Governor VOINOVICH. Was that an editorial from a paper or an article that appeared in the paper?

Mr. SANDERS. It's by a gentleman named Gene Dubel, I believe, who is the associate editor of the Plain Dealer's editorial pages.

Governor VOINOVICH. OK.

Mr. SANDERS. March 2nd. I would also like to place into the record the non-monetized benefit categories. In other words, as, I think Mr. Brodsky, was mentioning earlier, there are many aspects of this problem that are not being calculated by the EPA. The amount of physical damage that is being done to people. I would like to place that in the record.

[The information referred to follows:]

NON-MONETIZED BENEFIT CATEGORIES

- Reduced chronic respiratory damage/premature aging of lungs
- Reduced susceptibility to respiratory infection/altered host defense mechanisms
- Reduced cancer and other health effects caused by toxic pollutants (ozone and PM controls will reduce toxics)
- Reduced alteration of airway responsiveness
- Reduced incidence of significant changes in pulmonary function
- Reduced acute inflammation and respiratory cell damage
- Reduced nitrogen deposition in sensitive estuaries (e.g.,ChesapeakeBay.)
- Protection of national parks, non-commercial forests, and ecosystems
- Increased yields of tree seedlings
- Reduced materials damage (e.g., dirt on buildings)
- Reduced mortality/morbidity from lower fine particle levels from ozone controls
- Improved visibility resulting from ozone controls
- Reduced damage to urban ornamentals (e.g., grass, flowers, trees, shrubs) from ozone controls

Mr. SANDERS. Let me begin. I have a couple of questions for Mr. Brodsky and Mr. Russman, and then I'd like to ask the Governor.

Mr. MCINTOSH. Mr. Sanders, if you could have the staff identify the source of that for us, that would be helpful.

Mr. SANDERS. We sure will. Thank you. And this is to both the assemblyman and the Senator. Governor Voinovich testified that it would be unfair to force Ohio to meet the new standards. And he indicates that there are dangers to the economy and jobs and so forth. As folks from the northeast, whose people are suffering physical illness, who I've seen in the cases of New England, declines in our lakes, acid rain impacting our forests, would you like the opportunity to respond to the Governor? Mr. Brodsky, do you want to begin?

Mr. BRODSKY. Yes. I don't dispute the Governor's facts and figures with respect to the investment of Ohio utilities. But I did not hear him say that Ohio was not a major transporting in of toxic substances in my State. And if that is the case—and I think that's inarguable—that's why we have an ozone transport committee—then the question remains—and this is why we have a Federal Government—to whom do we turn for remedy?

To whom do the sick people of New York turn when the people of Ohio and Illinois are prospering economically, perhaps, at the cost of destructive health effects in my State? If the Governor's testimony is that Ohio is not affecting the health of the people of my State, then we have a factual dispute. If we don't have a factual dispute—and I don't think we really do—then I don't understand under what equitable process New York can be asked to absorb the health effects of his activity without seeking some remedy of the Federal Government. And that's why I think the standards made a lot of sense.

Mr. SANDERS. Senator, before you begin, I should point out that, of course, the Governor of the State of Vermont also supports these new proposals. But I would like you to comment from the perspective of New Hampshire.

Mr. RUSSMAN. Well, our Governor has gone on record as being in favor of them, as other people from New Hampshire have, including the Business and Industry Association, which is the largest business trade group. Clearly, we're also concerned when you talk about deregulation that it's only going to get worse. And we feel that we need these standards now in order to make sure that it doesn't get worse. A lot of these old coal-fired plants and so on were given exemptions over the years.

And we were told that they were going to be out of business and closed up in 20 years, which would be now. And, obviously, they're gearing up to go even bigger once deregulation and free-wheeling takes hold. So, we are very, very concerned. And certainly our area is suffering. And it's going to suffer economically even more if these proposals aren't implemented.

Mr. SANDERS. The Governor talks about problems that this proposed legislation would have on Ohio. What are we seeing in New England, Mr. Russman, in terms of the problems that already exist because we don't have regulations that are being proposed?

Mr. RUSSMAN. Well, on a clear day you can't see very far from Mt. Washington. I can tell you that. And that doesn't help our tour-

ist industry, which is virtually our largest industry in New Hampshire. And we are faced with some forestry deprivation and degradation. And not to mention the health aspects of it, of our people. We have to suffer. And we don't like it.

Mr. SANDERS. Thank you. Now, Governor, if I might—you mentioned—I'm sure that you would agree that with a radically changing economy, there are a dozen different factors of why jobs disappear. Companies are moving to China because they can hire workers at 20 cents an hour and so forth and so on. But let me ask you this question, in your testimony, as I understand it, you suggest that the proposed EPA clean air regulations will kill jobs across Ohio—and I believe you used the word—devastate small businesses.

You further argue that the regulations may cause a major Ford Co. foundry to curtail production, as I understand it. I assume that you have some evidence from the past to make these charges. What evidence do you have the Ohio manufacturing plants have closed down or laid off workers in response, specifically—now, we know you've suffered job loss—but could you tell us maybe specifically or provide for the record those plants that have been closed down and laid off workers specifically as a result of EPA clean air rules?

Governor VOINOVICH. I think that what we can say is that the businesses in Ohio have done a tremendous job in complying with the current standards that are in existence and have spent billions of dollars to clean up the air. For example, ozone has been reduced overall 25 percent.

Mr. SANDERS. But that's not answering the question, sir. You talked about devastation, closing down companies, losing jobs. Can you give us some specific information.

Governor VOINOVICH. I'll just give you—we're doing an analysis, and I'm going to share that with the Congress. Businesses throughout the State where we're really trying to go in there—for example, this casting plant I'm talking about predicts that if the particulate matter goes into effect, they would have to spend, I think, up to the tune of about $45 million in order to comply with the new standards. And they say that even if they did, they couldn't achieve the standards as they're set for particulate matter. And, therefore, the alternative is to cut back on the production of that facility: the only alternative is to close it out.

Mr. SANDERS. Governor, if I may. The question that I asked is if you could provide us with concrete, specific names of companies that have been closed down because of EPA clean air rules.

Governor VOINOVICH. I can show you—I will submit to you the list of coal mines in Ohio and the names of miners who are out of work and have closed down because of the proposed standards. In addition to that, I can submit to you evidence or information about utility rates that have increased.

Mr. SANDERS. OK.

Governor VOINOVICH. May I finish? Because you're talking about the Northeast and so forth. First of all, I am very much aware——

Mr. SANDERS. Well, let me ask the chairman. Mr. Chairman, how do we propose? Because if the Governor wants to respond, which is OK with me, I would like the chance to respond to the Governor.

Mr. MCINTOSH. Sure. Let's do it. Let's go ahead.

Governor VOINOVICH. I'd just like to say that we're very much aware of the problem of the ozone transport. And what we're working on—my (Environmental) director is very much involved in that. We have a difference of opinion. You folks feel that you get a whole lot of stuff from Ohio and from the Midwest. And our feeling is that it's minimal and that it certainly isn't your problem. For example, in most of your States, you have no auto emission testing. For example, I talked with Senator Chafee. And they tried to do it in Rhode Island. And they discontinued it.

I'm just saying that the people in our State have really done a wonderful job of making sacrifices so that we can have clean air. And we don't believe that your problem is caused by Ohio, and there are things that could be done more effectively in your part of the country to deal with the problem that you have.

Mr. SANDERS. Governor Voinovich is chafing.

Mr. BRODSKY. I agree. Mr. Chairman.

Mr. SANDERS. Let me give a minute of my time.

Mr. BRODSKY. Very briefly, I appreciate the kind words of the Governor. I think that's a question of fact. I disagree. I think we can establish that we have done all of these things. And the Federal Government tells us that we cannot come to attainment by ourselves, that the reason we're out of attainment is western downward States. The States of the distinguished chairman, your State and others. If that is factually true—and that's a dispute we ought to have—then it strikes me that you have something more than a moral responsibility, and the Congress certainly has a legal responsibility to level the playing field.

Mr. SANDERS. All right. I would just conclude, Mr. Chairman, by saying that I did not hear from the Governor about the loss of manufacturing jobs as a result of EPA regulations. You mentioned coal miner jobs. I appreciate that. I did not hear you specifically mention——

Governor VOINOVICH. I think that specifically, because of the fact that we've spent the money, that we have remained competitive.

Mr. SANDERS. Yes.

Governor VOINOVICH. I can't say, for example, if when LTV expanded their production facilities in other parts of the country, that that wasn't done partly because of the costs that they would incur in terms of meeting the ambient air standards. I can tell you a perfect example of the kind of thing that does happen, however. You take Lorain, OH where the U.S.S. KOBE wanted to put in a new blast furnace—$100 million. And the EPA told them they couldn't do it because they didn't meet the new ambient air standard that they calculated when U.S.S. KOBE was out of business.

Now, the irony of it is, that they grandfathered in an old blast furnace that was polluting the air to beat the band. And as a result of a lot of work on our part—and they're paying a $500,000 fine—we closed down an old blast furnace and put in a new blast furnace. But had they not been able to do that, they would have had to shut down part of the productivity of that facility.

Mr. SANDERS. It's an interesting dialog. I'd love to continue it. But the chairman, I think, indicates otherwise.

Governor VOINOVICH. Yes.

Mr. MCINTOSH. Let me take the time. I can also, at some point, give you a personal example in Indiana. But let me now recognize the chairman of the full committee, Chairman Burton.

Mr. BURTON. Well, first of all, Mr. Chairman, I want to thank you for having this hearing. And I want to thank the distinguished panel for being here. And I've also been an admirer of Governor Voinovich. And we're very happy to have him here, as well. Let me just, before I yield to the chairman of the subcommittee, let me just say that any information that you have, Governor, that would give us statistical information or data regarding what you believe resulted in the loss of jobs because of these problems, we'd like to have.

I'm going to check on Indiana and some of the other midwestern States to find out what the result was. And we'll try to give that to the chairman for entry into the record and further study. And with that, I'll yield to my colleague, Mr. McIntosh.

Mr. MCINTOSH. Thank you very much, Chairman Burton. I appreciate you coming today. First, let me actually share a personal example that I had in Indiana where I know a foundry was closed down. I worked for one in Kendallville, when I was working my way through college. As a result of the new clean air standards that came into effect in the 1980's, they had to shut down production, and over 60 people lost their jobs in my home town. We've seen that throughout the Midwest, as the Governor has pointed out, that the companies that have survived have become more competitive and been able to thrive. But now we're going to see another round of it if we change the standards.

I have another question for Governor Voinovich. I guess it gets back to some of EPA's decisions on this. I find it fascinating that in your impression Carol Browner does not, at this point, have an open mind about this, although the law requires that she consider all of the comments before deciding whether to go final. But don't you find it troubling—and I find it outrageous—that EPA has certified that these standards will not have any significant impact on small businesses. I guess what I'd do is address that to each of the panel members here. Governor Voinovich, if you want to lead off.

Governor VOINOVICH. Well, I think that one of the things you're going to have to decide is whether or not the small business regulatory relief legislation that you passed is applicable. I think she's basically said it doesn't apply to what she's doing currently. And I think that's something that Congress is going to have to decide. If she does pass these rules, you're going to have to decide whether or not you have the right to overrule them either under unfunded mandates or under Don Nickles' regulatory small business relief legislation.

Mr. MCINTOSH. Well, the courts may, in which case we have uncertainty for an extended period of time, which many would argue gives you an even worse environmental result because people don't know what rules they're supposed to follow. But I agree with you. It's very clear that she's not following that. And there's a dispute even in the administration. Any other comments from the panel on that?

Mr. SCHOENBERG. In his comments, the commissioner for the environment, Henry Henderson, of the city of Chicago, did make ref-

erence to this. In the State of Illinois, we are especially faced with a phenomena of wanting to do what we can to strengthen our environmental standards, our air quality and the quality of our public health. At the same time, we do not wish to export businesses, particularly small businesses, outside the immediate Chicago area. Specifically, Mayor Daley's effort on Brownfields is a prime example of how small businesses would be significantly hurt if, in fact, we were to proceed with the new standards. The inability to further redevelop the Brownfields as a result of the exporting of both resources and jobs for economic development as well as transportation resources would have a significantly negative effect on small business in the city of Chicago. And we believe since the city of Chicago is the largest region of the State of Illinois, it would have a detrimental effect to the entire State as well.

Mr. RUSSMAN. From New Hampshire's point of view, we think that, if anything, that these new standards will spur economic growth. We think if the vast sums of money are even partly true, that it's going to cost to implement these. That money has got to go somewhere. We assume that it's going to go to jobs and additional industry and manufacturing type jobs and environmental type safeguards that will be brought into it.

Mr. BRODSKY. Mr. Chairman, I thought I would answer this——

Mr. MCINTOSH. To the tune of a wealth transfer at that point.

Mr. BRODSKY. Well, on economics—it's not a wealth transfer, it's a creation of jobs. Any creation of jobs is a wealth transfer. But the economic activity that compliance will cause will be felt in terms of things purchased and jobs created. Now, it may not be in the same region, and it may not be dollar for dollar, but there is a stimulative economic effect of environmental regulation, which seems to me to be inarguable over history.

But the only point that I'd make very briefly is, I'm sure that there are regulatory elements that any bureaucracy would fail to adequately address in a rulemaking. And that's why you have congressional committees to check. I would just urge that the same degree of concern be expressed by members of the non-monetized benefits. In other words, they're hammering on only one side of the inadequacy of the EPA rulemaking troubles me, sir.

Mr. MCINTOSH. I'll grant you that. And I agree we should get it exactly right and look at both sides of that.

Mr. BRODSKY. Thank you.

Mr. MCINTOSH. I'm going to yield the rest of my time.

Governor VOINOVICH. Could I——

Mr. MCINTOSH. Governor Voinovich, if you have one additional comment.

Governor VOINOVICH. One of the things that I was impressed with—and I don't know—has Commissioner Henderson testified before your committee—the health commissioner?

Mr. MCINTOSH. No.

Mr. KUCINICH. These are comments to the proposed——

Governor VOINOVICH. The proposed.

Mr. MCINTOSH. The proposed.

Governor VOINOVICH. But the fact of the matter is that—and this is a quote from him—he's talking about the measures that helped clean up the air. And he says, "They have cost us dearly in terms

of public health. Since these measures took effect the city experienced substantially inhibited growth of large commercial and industrial manufacturing facilities. In fact, many businesses have even left the city for suburban areas that lie beyond the non-attainment area, where the regulatory requirements are far less burdensome. It would be utterly false to maintain this phenomenon has resulted in anything less than serious and detrimental effects on the public health of city residents and, in particular, on the economically disadvantaged and those who reside in the inner city.

"This lack of growth has translated into an increase in job loss, particularly for blue collar workers, which includes a loss of health insurance coverage and other job-related benefits, an increase in the number of abandoned, contaminated Brownfield sites, which means an increase in the number of residents who are now exposed to them, a loss of small business and other services, including health care facilities to serve area neighborhoods, loss of personal security, and a general deterioration of infrastructure in the urban core."

I will do an analysis for Representative Sanders, of Ohio, to try and see if we can't calculate specifically the impact that the current standards have had on the economy of Ohio in terms of current jobs, and not only current jobs, but also if we can identify if businesses have chosen not to expand in the city because of these standards and have gone to other Greenfield areas.

Mr. MCINTOSH. Great. I appreciate that. We will hold open the record in order to make that analysis a part of the record from this hearing. I ask unanimous consent to put the Commissioner's testimony to the agency in the record as well.

[The information referred to follows:]

A-95-54
A-95-58
IV-F-3

COMMENTS ON PROPOSED OZONE AND PARTICULATE MATTER RULEMAKING
Docket No's. A-95-54, A-95-58

January 14, 1997

I am the Commissioner of Chicago's Department of Environment. Today, I am representing Mayor Richard M. Daley and the City of Chicago.

The primary responsibility of the Mayor is to protect the public health and safety of all Chicagoans. In a fundamental sense, every action the City takes is in some way related to protecting the health of Chicago's citizens.

The U.S. EPA believes that our health can be improved if America's air is cleaner, and I wholeheartedly agree. I want Chicago's -and America's - air to be cleaner. But we need you to roll up your sleeves and help us fight the fight. Just ordering the City of Chicago to clean the air is

not helpful.

If the federal government mandated that urban crime rates be reduced by 20% over the next five years, but offered no plan for achieving that goal, would it be workable? If, in addition to mandating the 20% reduction, they also told cities their federal assistance for existing crime-fighting programs would be cut if the goal wasn't met - crime would increase, not diminish.

How are EPA's proposed standards, divorced as they are from any rational plan for implementation, any different from that scenario? Our concern is that the health goals behind the proposed standards cannot be reached without a proper, funded, implementation strategy.

In Chicago, we have made significant progress in improving public health by effectively reducing levels of

ozone and soot in the air. This happened because state and local governments, along with the private sector and EPA, worked together on a wide range of effective programs, and resources were provided by, among others, the federal government.

Now we contemplate more stringent standards. Let's be clear: we want cleaner air. But the issue is cast in such a way that we are debating abstract standards rather than promoting an effective plan for clean air.

We believe that air quality standards should be based on comprehensive public health criteria. But there is more to public health than measuring clinical effects. Good nutrition, access to effective health care, viable housing and personal security all contribute to public health, safety and welfare. Good, well-paying jobs provide these things. When jobs disappear, when urban sprawl and its

attendant pollution occur, public health declines.

Implementation of your proposal as it currently stands will have negative health effects. It will drive more companies to the urban fringe, reversing years of progress on brownfields remediation and generating significantly more atmospheric pollution from automotive exhaust. There will be yet another round of unnecessary highway construction in cornfields, followed by loss of farmland, habitat, and degradation of the nation's waters.

The most recent numbers available for the period 1990-94 show that the growth of annual vehicle miles traveled in Cook County is 3.7%, yet in the five collar counties, the number is 29.7%. This is the very definition of urban sprawl. We don't need more of it. If these new standards are to make headway in the struggle, they must reverse and repair the damage urban sprawl has already done.

How can this be done?

First, we must recognize that the progress in cleaner air can now come only through national means and programs, not by more of the same sanctions on cities and their regions. The federal government must recognize that it alone has the power to address the most critical issues contributing to non-attainment of air quality standards.

We can't forget that the greatest contributor to air pollution today is not factories and businesses. It's cars, trucks, diesel engines and other mobile sources. These account for up to 84% of volatile organic, nitrogen oxides and carbon monoxide emissions in our area.

But what can we, as a City, do about this? Can we regulate how much smoke a diesel truck from

Pennsylvania can put into our air as it passes by us on Interstate 94? Of course not. Only with national standards for improved functioning of such mobile sources, and the aid of USEPA can these nation-wide emissions be addressed in a manner that positively impacts public health

We cannot comply with the new proposed standards by further regulating the already highly regulated stationary industries within our area, possibly jeopardizing jobs and the City's economic health.

The sanction strategy presently part of the Clean Air Act will further penalize this region. Therefore, these proposed standards will be the engine for further decline rather than the agents for improved public health.

In addition, consumer products such as paints and

aerosols, used in Chicago but manufactured elsewhere, since their sale is protected by interstate commerce, fall wholly within the purview of the federal government. Mayor Daley does not have the jurisdiction to improve air quality through action in this important area. Until you promulgate effective standards nationwide for such products in interstate commerce that significantly reduce these emissions, you will be condemning America's already overburdened urban areas to continuing non-attainment.

Today, 8.5 million people in our metropolitan area are exposed to occasional poor air quality, because the non-attainment area has expanded in the last few years. Simply raising the goalpost will spread the problem further. This is wholly counterproductive. It's time to recognize that standards, and the means for achieving those standards, are inseparable.

The President has recognized this in the area of brownfields: The systematic approach adopted there must be applied to the clean air battle.

Secondly, progress can come through the expansion of EPA support for the air quality programs that have demonstrated their effectiveness.

Chicago is in the enviable position of having one of the nation's most valuable public transit systems in place. But, today, years of federal disinterest in mass transit is threatening the very existence of this wonderful pollution fighting machine. The system needs maintenance, operating support and expansion. Enticing motorists onto the rails with faster, more efficient transportation than any car could provide will do more to clean our air than any single anti-pollution strategy.

Inspection and enforcement programs, like those pursued by the City of Chicago, with federal economic assistance, have greatly advanced our air quality. Rather than strengthening these programs, the promulgation of the proposed standards could seriously undercut them by diverting already scarce federal resources to new programs for applying the new standards.

Further, improvement of national air quality is hamstrung by an incoherent division of programs among EPA, the Department of Transportation and the Department of Energy. Given that the greatest advances can come from addressing mobile sources, the lack of coordination on transportation planning, clean energy, alternative fuels and clean air act goals must be redressed.

The City of Chicago calls upon the EPA to convene an interdepartmental task force to formulate a coherent

federal approach to improving our air.

Here again, the brownfields program shows the way.

We have all come to understand the unintended negative consequences of certain environmental programs such as Superfund, which sometimes put locks and chains around valuable, if polluted land, spurring urban flight. Today, that has changed. In Brownfields, we recognize that every action, no matter how well intended, has a ripple effect.

As City officials, we face this issue every day. We can never lose focus on the big picture. This is not a debate about whether we need cleaner air. We do. This is about public health and welfare, in its broadest application. Clean air standards as part of a comprehensive, coherent action plan. Standards can not, and should not, be contemplated in a vacuum.

They must be part of a sound economy, access to health care and health insurance, lowered risk of exposure to contaminants at abandoned sites, access to mass transit that reduces vehicular exhaust, and, in general, a program that genuinely makes the air cleaner.

After all, Standards do not improve public health. Cleaner air does.

Additional supporting documentation for this testimony will be submitted in written form to USEPA by the February 18 deadline date.

Mr. MCINTOSH. We've got about 6 or 7 minutes to vote. Do you all have a few questions? Do you think we can proceed to those now and then dismiss the panel? Or do you have extensive questions?

Mr. KUCINICH. I have a number of questions. Yes, Mr. Chairman.

Mr. MCINTOSH. OK. If I may ask the panel to stay with us for a little bit longer. We'll be gone probably about 15, 20 minutes and then return. Why don't we say we'll reconvene in 20 minutes.

Mr. SCHOENBERG. Pardon me, Mr. Chairman. I may have to excuse myself early. I have to catch a plane back to our State capital to vote, myself.

Mr. MCINTOSH. I appreciate that. Thank you very much, Mr. Schoenberg. If there are any questions, we may send them to you.

Governor VOINOVICH. Mr. Chairman, I can't come back in 20 minutes.

Mr. MCINTOSH. Do you want to ask any—we've got about 2 more minutes and then we can leave.

Mr. KUCINICH. Thank you, Mr. Chairman. I do have some questions. And I—first of all, I'm going to submit for the record information that shows that there's no relationship between strong environmental laws and weak economic growth. This is a study from the California Senate Office of Research. It covers many different States.

[The information referred to follows:]

DUNN-EDWARDS CORPORATION

Analysis of Respiratory Deaths

1990 Respiratory Death Rates for California Counties with Populations in Excess of 80,000 Residents

	Population	% of CA population	Respiratory deaths	Respiratory death rate per 100,000	% Variation from CA average ⇓
CALIFORNIA	29,976,000	100.00	21,444	71.5	
Santa Clara	1,502,200	5.01	786	52.3	-26.86
Solano	345,700	1.15	195	56.4	-21.15
Monterey	358,800	1.20	203	56.6	-20.91
Merced	180,600	0.60	104	57.6	-19.50
Kings	102,500	0.34	62	60.5	-15.45
Los Angeles	**8,897,500**	**29.68**	**5,531**	**62.2**	**-13.10**
Ventura	671,600	2.24	423	63.0	-11.96
Orange	2,424,100	8.09	1,570	64.8	-9.46
*4 SC Counties**	*13,957,700*	*46.56*	*9,098*	*65.2*	*-8.88*
San Bernardino	1,440,700	4.81	972	67.5	-5.69
San Diego	2,520,500	8.41	1,704	67.6	-5.50
Fresno	673,900	2.25	468	69.4	-2.92
Alameda	1,282,400	4.28	893	69.6	-2.66
Santa Barbara	371,400	1.24	266	71.6	0.12
Contra Costa	810,300	2.70	598	73.8	3.16
Madera	89,800	0.30	68	75.7	5.85

continued ...

	Population	% of CA population	Respiratory deaths	Respiratory death rate per 100,000	% Variation from CA average ⇓
Santa Cruz	230,800	0.77	177	76.7	7.20
Sacramento	1,051,400	3.51	825	78.5	9.69
Tulare	314,600	1.05	253	80.4	12.42
Marin	231,200	0.77	187	80.9	13.06
San Mateo	652,100	2.18	529	81.1	13.40
San Joaquin	483,800	1.61	395	81.6	14.13
Imperial	110,400	0.37	91	82.4	15.22
Sonoma	392,000	1.31	336	85.7	19.82
Riverside	1,195,400	3.99	1,025	85.7	19.86
Placer	175,600	0.59	151	86.0	20.20
Kern	549,800	1.83	473	86.0	20.26
San Luis Obispo	219,500	0.73	189	86.1	20.36
El Dorado	128,200	0.43	114	88.9	24.30
Mendocino	81,000	0.27	74	91.4	27.71
Yolo	142,500	0.48	131	91.9	28.51
Humboldt	119,800	0.40	112	93.5	30.69
San Francisco	723,900	2.41	759	104.8	46.57
Stanislaus	376,100	1.25	443	117.8	64.65
Shasta	148,800	0.50	186	125.0	74.73
Butte	183,900	0.61	236	128.3	79.39
Napa	111,700	0.37	158	141.5	97.73

* *Los Angeles, Orange, Riverside & San Bernardino*

Data from *1990 Vital Statistics of California*, Department of Health Services

Mr. KUCINICH. Also, I'm going to submit for the record that Ohio's job loss—the Governor has not been able to produce any information pursuant to Congressman Sanders' question about the job loss that's occurred as a result of air quality rules. I do have for the record details on the job loss in manufacturing that has occurred in Ohio recently due to NAFTA. This comes from the trade adjustment.

Mr. MCINTOSH. Mr. Kucinich, we can put all of those in when we return from the vote. So, why don't we now recess and——

Mr. KUCINICH. And I have one question of the Governor, then. Since the Governor raises the economic issue about the loss of jobs, and has raised it in respect to Lorain and also Ford casting, what evidence does he have to back up the charge that loss of jobs will occur as a result of air quality when the loss of jobs that has occurred has been related specifically to NAFTA, which you, Governor, have supported?

Governor VOINOVICH. The issue here today is not to debate NAFTA, Congressman Kucinich. The issue here today is——

Mr. KUCINICH. We're debating job loss here.

Governor VOINOVICH. That's debatable. I can show you statistics that show that Ohio's economy has benefited substantially from international trade, and it's been a great boom to our economy and one of the reasons why we had our bond rating increased for the first time in 17 years. But that's another debate.

Mr. KUCINICH. We've lost jobs, Mr. Chairman, if I may. What evidence does the Governor have to show us that we have lost jobs in manufacturing because of air quality standards and what evidence does he have to refute these statistics from NAFTA's TAA office that we have, in fact, not lost jobs in Ohio and have, in fact, gained jobs due to NAFTA? These aren't my figures. These are official records. And I want to submit these for the record. And I'm just asking the Governor to respond. Where is your proof?

[Note.—The report entitled, "Clean Air Act—Job Impact for Ohio" can be found in subcommittee files.]

Mr. MCINTOSH. Mr. Kucinich, the Governor has indicated he will give us a full analysis in writing. We will hold open the record in order for him to do that. Did you have any other points you wanted to make on this?

Governor VOINOVICH. I don't have any question except that there's a difference of opinion on the impact that international trade has had on Ohio. I think the implication is that if jobs have been lost, it's because of NAFTA and not because of problems with ambient air standards. I said that I'd have to look into some specifics on that. I can say one thing. We're going to do a very good job, Mr. Chairman, of documenting the businesses in Ohio who currently are very concerned about ozone and particulate matter in terms of whether they're going to be able to expand or whether it's going to limit their productivity. And we'll share all of that information with you.

Mr. MCINTOSH. I appreciate that greatly.

Mr. KUCINICH. Thank you, Mr. Chairman. Thank you. Thank you, Governor. It's good to see you again.

Mr. MCINTOSH. We'll stand in recess until 5 minutes after 1, at

which point, if the other members of the panel are able to stay, we'll finish up here and then move on to our final panel. I appreciate all of you coming. Thank you very much.

[Recess.]

[The information referred to follows:]

GEORGE V. VOINOVICH
GOVERNOR

STATE OF OHIO
OFFICE OF THE GOVERNOR
COLUMBUS 43266-0601

To: DMM
MW
DA
CJ
AO

April 22, 1997

The Honorable David McIntosh
Chairman, Subcommittee on National Economic Growth,
Natural Resources and Regulatory Affairs
1208 Longworth House Office Building
U.S. House of Representatives
Washington, DC 20515

Dear Chairman McIntosh:

Thank you very much for the opportunity to testify before your subcommittee on my concerns about EPA's proposals to change the National Ambient Air Quality Standards for ozone and particulate matter.

As you know, my testimony included a passage from *The Cleveland Plain Dealer's* editorial opposing EPA's proposal. Congressman Sanders introduced into the record another article from *The Plain Dealer* supporting a change in the standards, which he mislabeled as an editorial. I want to make clear that the article he introduced is a column and does not represent the editorial policy of the paper.

For the record, I would like to make available to the Subcommittee a copy of *The Plain Dealer* editorial I referenced in my testimony as well as editorials from other newspapers across Ohio in opposition to EPA's misguided rule.

Thank you for your consideration.

Sincerely,

George V. Voinovich

George V. Voinovich
Governor

Attachments

THE PLAIN DEALER
SUNDAY MARCH 9, 1997

THE PLAIN DEALER
SUNDAY MARCH 9, 1997

ALEX MACHASKEE
President and Publisher

DAVID HALL
Editor

ROBERT M. LONG
Executive Vice President

BRENT W. LARKIN
Editorial Page Director

THOMAS H. GREER
Vice President, Senior Editor

A hazy argument

The EPA should take a deep breath and consider what proposed air standards would and would not do

If the U.S. Environmental Protection Agency's case for its proposed new ozone and particulate-matter rules weren't so unpersuasive, the outcry against them would be just so much more "wolf."

Over the years, business and industry have balked at the difficulty and cost of cleaner air, yet have managed to meet national standards without their predicted financial cataclysms.

But cost is not the only argument against the new rules, and fortunately so: The Clean Air Act arguably should but inarguably does not require the EPA to weigh the potential benefits of tightening pollutant standards against the costs. Other, more recent legislation does require cost analyses by the EPA; in this instance, the agency's cost-benefit figures are questionable. More important, so is the science.

The Clean Air Act requires periodic review of pollutant standards. It does not require the EPA to tighten standards unless doing so will appreciably affect public health. Historically, EPA standards reflect links between pollutants and health weaker than those reflected here. But that's hardly a reason to use ever-weaker science in the hope of achieving ever-diminishing benefits at ever-rising cost.

The health benefits of tightening the standard on ozone are at best minimal: At any level above zero, ozone will cause somebody some (usually temporary) respiratory distress. But a level of zero is unattainable and, according to the EPA's Clean Air Scientific Advisory Committee, neither the present standard for ozone nor EPA's stricter proposals can be distinguished as "significantly more protective of public health."

As for the impact of fine particulates on health and therefore the impact of imposing new standards regulating them, experts question the adequacy and reliability of the data on which the EPA relies. Its new rules setting a stringent standard for fine particulate matter are also the first to require monitoring its prevalence and source. Meantime, the EPA leaps from a correlation between fine particulates and illness and deaths to causation, despite evidence that other pollutants, high humidity, even the season correlate as much or more.

Extensive research shows, moreover, that indoor air — dust, mites, cigarette smoke — is far more the culprit in the sharp increase in asthma than outdoor air. Remedies other than multibillion-dollar anti-particulate measures would have greater benefit to public health.

Given the "many unanswered questions and large uncertainties" about the role of fine particulates, the chairman of the EPA's Clean Air Scientific Advisory Committee told Congress last month, "only a minority" of the panel supported EPA's proposal. Unanimously, however, the panel "strongly recommended that the EPA immediately implement a targeted research program," with panel members' help, to find necessary answers before the EPA again reviews particulate standards several years hence. "There is time," the chairman added, "to conduct the research . . . which targets [the panel's] concerns. Then appropriate [fine particulate standards] could be established."

D

So it isn't just business, industry and states, like Ohio, that oppose the EPA's proposed rules. But business, industry, and particularly Ohio, would suffer unfairly from their imposition.

Reducing annual hospital admissions (by somewhere between 0.1 and 10 percent) and deaths nationwide (by 20,000 to 40,000) is the EPA's prime argument for its proposals and a prime factor in offsetting the cost of its new particulate and ozone rules. But the EPA's cost-benefit projections have raised more questions — inside the Clinton administration and out — than the EPA has been willing to answer.

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THE PLAIN DEALER
SUNDAY MARCH 9, 1997

Tens of millions of Americans now live in areas that haven't met the EPA's current standards. Tens of millions more will live in areas that don't meet the new standards — including the millions of residents of Ohio's seven major metropolitan areas. Assuming, as the EPA does, adequate technological advances, the cost of reaching attainment — if, as the EPA asserts, the technology exists — statewide could rise to $4 billion, nationwide to $20 billion. Meanwhile, the full offset of the EPA's projected health savings wouldn't accrue.

Since 1989, according to state officials, Ohio has invested $15 billion to attain EPA standards on air pollution. That's more than has been spent by 12 Northeastern states combined, and it shows: The Northeast not only outdoes Ohio in nonattainment. It wants to bill Ohio and other Midwest states to mop horrendous pollution it claims wafts eastward. That's disputable, though not by the EPA. Not disputable is that nonattainment status discourages business investment there, just as it would here.

The new EPA rules would not only level the (non)attainment status among these competing states. They would not only require Ohio to spend ever more billions on diminishing returns. They could also mean the expansion of E-check and other measures — from mandating carpools to outlawing barbecue grills — whose inconvenience, expense and intrusiveness outweigh their effectiveness.

To oppose the EPA's new rules is not, as some supporters suggest, to favor air pollution, asthma attacks or premature death. To oppose these rules is to favor solutions to identifiable problems, expenditures that produce the predicted results, science that stands up to scrutiny, rule-makers who respect the difference, and laws that expect them to.

Lawmaking is Congress' job, and Congress resumed the authority last year to evaluate and reject overreaching environmental regulation. It may have to exercise that authority here. But that's a stopgap fix. The fuller fix is making the Clean Air Act reflect the uncertainties of science and the diminishing benefits of ever-tighter standards vs. ever-rising costs.

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THE CINCINNATI ENQUIRER
TUESDAY MARCH 4,1997

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A Gannett Newspaper

Weird science

Clearly, EPA is blowing smoke with shaky clean-air arguments

For an agency that wants to clean up America's air, the U.S. Environmental Protection Agency (EPA) seems bent on clouding the issue.

Questions from politicians, business leaders and scientists have exposed the EPA's proposed new air standards as a junk-science smoke bomb.

EPA is asking Americans to spend $16.5 billion a year (its own estimate) to control soot and smog at levels so minuscule that projected health benefits may be statistically insignificant.

"The issue is its specific benefits to public health versus its enormous cost," Ohio Gov. George Voinovich told the *Enquirer* editorial board. Standards on ozone and particulates would require Ohioans "to spend billions of dollars to attempt to reach a standard that offers little additional protection of public health," he said.

Mr. Voinovich, who has led a national fight against the EPA proposal, won round one this month when a federal court extended the deadline for public comments from Feb. 18 to March 12, pushing back EPA's deadline for promulgating rules to July 19.

Among Mr. Voinovich's concerns: East Coast states that are not in compliance favor EPA mandates that push the Midwest into the same job-killing category, and wipe out the economic advantage from millions spent on air quality by Ohio. "It's going to be a long process," Mr. Voinovich said.

It should be.

Hard data to justify the new rules "just isn't there," said Donald Schregardus, head of Ohio's EPA.

"Even if you assume the EPA's numbers, asthma attacks would lessen by less than 1 percent with the new standards," Mr. Schregardus said. EPA Administrator Carol Browner has cited increases in asthma, especially among children, as a principal argument for the new rules.

If those standards were in effect now, 335 U.S. counties would be in violation, according to the EPA, compared to 106 under the current rules. Mr. Voinovich points out that 52 of Ohio's 88 counties would be violators.

Nationwide, about 53 million people would live in areas that cannot possibly comply with the rules, Mr. Schregardus said.

Go ahead, tell 'em

The U.S. Environmental Protection Agency (EPA) is taking public comments on its proposed clean air rules through March 12. Call its 24-hour toll-free line, 1-800-TELL-EPA. Written comments may be sent to U.S. EPA, Air Docket (6102), Docket #A-95-58 (on ozone rules) or Docket #A-95-54 (on particulates), Waterside Mall, 401 M St. SW, Washington, D.C. 20460.

E-mail: *general.comments@epamail.epa.gov*, *ozoneaq.comments@epamail.epa.gov* (on ozone) or *pmnaaqs.comments@epamail.epa.gov* (on particulates).

All comments received will be made available to the public. For more information, including the text of the proposed regulations, check the EPA's Internet Web site at *http://www.rtpnc.epa.gov/naaqspro/*

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THE CINCINNATI ENQUIRER
TUESDAY MARCH 4,1997

The Toledo area could "kiss the new Jeep plant goodbye," said Ohio Senate President Richard Finan, R-Evendale, referring to the Chrysler Corp.'s proposed $1 billion factory.

Most of Ohio would have to adopt reformulated fuels, enhanced auto testing (the hated Ohio E-Check program), carpooling, manufacturing limits and costly converters for boilers and power plants. Utility rates would go up an average of 7 percent — up to 17 percent in some areas.

"And some areas of Ohio wouldn't be able to meet the standards, even with all these controls," Mr. Schregardus said.

"If folks think E-Check is bad," said Rep. Rob Portman, R-Cincinnati, "just wait. I hope they use good science and slow this down."

He's right. That's a lot of economic damage for standards that are guesswork. Using the EPA's own figures, The Road Information Program (TRIP), a Washington-based, nonprofit research group, reported last week that the number of poor air-quality days has *dropped* 60.7 percent since 1986 — despite a 32 percent *increase* in vehicle travel in the past decade. U.S. air quality has improved dramatically.

Many areas — Cincinnati included — are still struggling to comply with the existing rules. Federal policymakers should stop and take a deep breath before blowing more smoke on air quality.

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The Columbus Dispatch

SATURDAY MARCH 8, 1997

The Columbus Dispatch

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Ozone nonsense

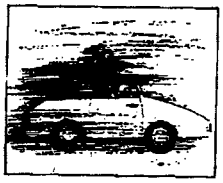
Say no to determined EPA on air standards

It's increasingly clear that the Clinton administration believes it won a mandate on environmental issues at the polls in November and now can act virtually without challenge.

U.S. Environmental Protection Agency administrator Carol Browner recently rolled out the red carpet to meet with Gov. George V. Voinovich and a bipartisan contingent of Ohio lawmakers concerned about the impact of proposed rules to reduce soot and smog.

The dialogue was polite, but many believe Browner already has her mind set to issue proposed ozone and particulate-matter standards, regardless of the adverse effect on jobs in Midwestern industrial states, such as Ohio.

That would leave Congress to be a protector of common sense, because under a new law, the legislature has the power to review and reject regulations. Unfortunately, the president could overrule Congress. Also, it's unclear whether Republicans, especially in the House, who were cowed over the drubbing they took on appropriations challenges to the EPA last session, would stand tall for protecting economic prosperity over unsubstantiated health concerns.



Prompted by a lawsuit by the American Lung Association, the EPA has proposed dropping the permissible level of ozone from 0.12 parts per million cubic feet of air measured over a one-hour period to 0.08 parts per million cubic feet over an eight-hour period. The agency also for the first time wants to regulate microscopic particles.

While this may seem reasonable, there's little sound science to back it up. And beside the potential impact on jobs, Ohio and Columbus residents could find themselves subject to more auto-emissions testing, mandatory car-pooling and other bureaucratic mandates if the federal EPA is allowed to go forward.

All but four of Ohio's 88 counties comply with the existing ozone standard, and all but two counties meet the existing particulate standard. As many as 51 counties could be out of compliance if the rules are adopted in July.

The EPA estimates that the tighter regulations would prevent 40,000 premature deaths annually and head off 500,000 respiratory illnesses. But there are questions as to whether their figures are valid. And why has Congress consistently fought efforts to balance possible benefits with the costs associated with achieving them?

Browner insists the EPA based its conclusions on more than 240 scientific studies on health effects, but one questions why these particular studies were selected from some 5,000 available. The public was given just 60 days to comment on the proposed standards — hardly time enough to separate quality science from guesswork.

There are real concerns that the EPA's proposals stem more from politics than science. They clearly follow the thinking of Vice President Al Gore, who in his book, *Earth in the Balance*, seriously suggests that perhaps the most important strategic goal of the environmental movement should be the elimination of the internal-combustion engine for transportation purposes.

This idealistic thinking could have drastic economic implications for developed nations, if the administration follows through not only with the proposed air standards but also with international commitments to reduce unilaterally greenhouse-gas emissions beyond the year 2000.

If the ozone rules go into effect, the EPA's own advisory committee projected that hospital admissions related to asthma in New York City would be reduced by less than 1 percent. Does that justify spending many billions of dollars annually — $760 million per year for Ohio alone, according to Ohio EPA estimates?

Implementation of the particulate standards, the state agency estimates, would cost Ohioans $2 billion annually. And yet even the Clinton administration has acknowledged the need for more information; its own budget would grant $28 million for more research on health effects related to particulate matter.

Sen. John H. Chafee, R-R.I., a longtime ally of environmentalists who helped strengthen the Clean Air Act of 1990, sees little wisdom in the proposed standards. He says, "In the name of public health, it is possible to press too far, too fast."

Chafee is worried about a congressional and public backlash against other provisions of the Clean Air Act if the EPA insists on tougher regulations.

Given the firestorm of anger around Ohio related to auto-emissions testing wherever it's already required, Chafee is right to worry that public furor will be ignited if the EPA goes forward with soot and smog standards that create huge bureaucratic nightmares but bring few health benefits to average citizens.

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OUR OPINION

Clean air and the law

In setting new standards for air pollution, the EPA has followed the law. The trick will be implementing them smartly and sensibly

What price cleaner air? Gov. George Voinovich has an answer. Since November, following proposals from the U.S. Environmental Protection Agency to reduce smog-producing ozone and tiny particles of dust, or particulates, that form soot, the governor has been howling. He has taken his campaign on the road, to Washington and across Ohio. He argues the tighter pollution controls will hurt the state economy and yield few health benefits.

Voinovich feels strongly about the issue. He argues that Ohio has already done its part for cleaner air. He points to the $19 billion the state's utilities spent on air pollution controls between 1989 and 1994. Ohio businesses have shelled out $5 billion to curb air pollution over the past two decades.

An element of election politics may be at work. The governor who implemented the controversial E-Check tail-pipe testing program and wants to be a U.S. senator in 1998 isn't likely to champion proposals that promise a new round of regulations.

Voinovich also notes the regional rivalries in play. Many Northeast states have not complied with current rules. As the governor sees it, these states would love to see their competitors to the west join them in failing to make the grade.

You see, what the EPA has proposed would require even broader schemes to limit air pollution. E-Check or something very similar would likely cover additional Ohio counties. Motorists would likely fill up their tanks with reformulated and slightly more expensive gas. Many industries and small businesses would feel the impact as they moved to comply.

During a visit to Toledo last month, the governor argued that the new rules would prevent the Chrysler Corp. from building a $1 billion Jeep plant in the city. To be sure, pollution controls carry costs. How standards are implemented can ease those costs. Significantly, the EPA would leave the task of how to comply with the new regulations to each state.

That allows for flexibility. What's more, it's worth recalling that with almost each call for expanded air pollution controls, from the advent of the Clean Air Act in the 1970s until today, opponents have forecast economic doom. Well, the American economy remains the strongest in the world, and Ohio, according to the governor himself, is as fit economically as it has been in years.

■

At times, Voinovich, in cudgeling the EPA proposal, suggests the agency has lost its collective mind, seemingly made up the need for additional reductions in air pollution. To the contrary, the EPA has followed the law.

The American Lung Association sued the EPA for failing to keep pace with the requirements of the Clean Air Act. As part of the settlement, the agency agreed to review certain air pollutants. The new proposals are the result of its review.

The Clean Air Act insists that policymakers and rulewriters place public health above all other priorities. What's more, the law demands that the EPA establish an "adequate margin of safety" and protect against "anticipated" health problems.

In seeking to meet these standards in regard to ozone and particulates, the agency relied on the counsel of its independent scientific advisory panel. The panel recommended higher ozone standards to protect the elderly or those with respiratory diseases. It also concluded that a health standard

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should be set for minute dust particles from combustion.

Members of the advisory panel differed on the precise remedy. The panel sent the agency a range of regulatory options. It did so knowing the evidence of health problems from ozone and fine particulates is stronger than the data that led to earlier regulations. The EPA then performed its own balancing act, weighing, yes, costs and benefits, to come up with its plan.

Does the evidence the agency used amount to absolute scientific proof? No. Advances in science and technology have made it more difficult to define exactly when a pollutant becomes harmful to health. At the same time, the agency is hardly out of line. By way of comparison, consider concerns about smoking. It wasn't until last year that scientists discovered a clear link between smoking and certain illnesses. Yet, for decades, Americans exercised precaution, believing, quite reasonably, that smoking was harmful.

■

The truth is, as harsh as his words have been, George Voinovich's problem isn't so much with the EPA as it is with the Clean Air Act, a law approved by bipartisan majorities in Congress and supported by Republican and Democratic presidents.

Perhaps the law should be altered to take into account the changing circumstances at EPA, where in protecting the public health, the agency seems headed toward ever tighter pollution-control regulations.

For now, EPA officials will consider the comments of Voinovich and thousands of others on its proposals for ozone and particulates. As agency officials move to implement the new standards, they would be wise to establish flexible timetables, allowing states a practical framework for compliance.

In the context of the law, the EPA has made the case for the new standards. Studies show they will produce health benefits. What price cleaner air? For all of the howling so far, the answer will depend on the dose of common sense the agency employs in implementing the standards.

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The Cincinnati Post
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SCRIPPS HOWARD

'Let light and let people see that their own way'

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Thursday, April 3, 1997

Editorials

Clean air, sane regulation

It is becoming increasingly clear that nothing anyone can say will keep the Clinton administration from imposing excessive new air pollution rules on the American public.

Within the next four months U.S. EPA administrator Carol Browner will likely impose regulations that would sharply ratchet down the permissible standards for both ozone and small particulates.

If she does, Congress ought to intervene on the side of sane regulation and scale back the EPA mandate.

The editorial board at The Post takes seriously the mandate for clean air. We've consistently endorsed emissions testing and other measures to cut down on pollution from automobiles. We believe that coal-fired power plants in the Ohio River Valley must have scrubbers, and we believe that industry is obligated to ensure that people's lives are not threatened by whatever comes out of its smokestacks.

But we also believe that environmental regulation needs to be sensible. While the first goal must be to protect the public health, it should be done in a cost-effective manner.

The Clinton administration wants to set the ozone standard at .08 parts per million (it is .12 ppm now) and to begin regulating the emission of dust particles so tiny that the equipment to measure them has only recently been developed.

If there were clear evidence that the existing standards for ozone and particulates were dangerous to the public health, or that the new ones would appreciably improve it, the administration plan would warrant support.

But the evidence just isn't there.

The U.S. EPA, the American Lung Association and a handful of other groups argue that the tougher ozone and particulate limits would pay for themselves by reducing hospital visits by asthmatics and in lost work time generally.

But most mainstream scientists who have examined the proposal, and even some within the EPA itself, have drawn no such conclusion.

What is clear is that the EPA mandates would pose an extraordinary financial burden on the nation — and on the Midwest in particular.

There's just no justification for the proposed EPA air quality rules.

The Ohio EPA estimates it would cost more than $750 million a year to comply with the ozone standard, and $2 billion a year for particulates.

Manufacturers warn that some companies couldn't comply with the standards even if price were not an object.

And Gov. George Voinovich voices legitimate fears that employers, rather than continue to struggle to meet clean air standards in areas such as Cincinnati that don't even comply with existing Clean Air Act standards, will locate elsewhere.

Better, we submit, to let the existing Clean Air Act requirements — which themselves will lower ozone limits — phase in. To see what happens as the last of the 1970s and 1980s era vehicles hit the scrapyards and are replaced by far cleaner models. To implement national, state and local land use policies that reduce urban sprawl and promote mass transit.

But don't put the Midwest's economy at risk for a wildly speculative health benefit.

Mr. MCINTOSH. The subcommittee will come to order. If I could ask the remaining participants in our second panel to bear with us. The staff is checking—we believe Representative Kucinich may have a couple additional questions for you, but until he comes back, what I'd like to do is go ahead and call the third panel. We may call you back for those questions after we've heard from our third panel of witnesses.

Mr. BRODSKY. Mr. Chairman, as a matter of procedure?

Mr. MCINTOSH. Yes?

Mr. BRODSKY. The panel may go—is this a large panel?

Mr. MCINTOSH. No. It shouldn't—my fondest hope is that we'll be completely finished by 2 o'clock, if that helps you. OK. If I could call forward Professor Schlesinger as well as Mr. Bertelsen. Thank you. If you could both please rise.

[Witnesses sworn.]

Mr. MCINTOSH. Thank you. Please let the record show that both witnesses answered in the affirmative. Our first witness on this panel is Professor William Schlesinger of Duke University. Professor, thank you for coming, and please share with us your testimony.

STATEMENTS OF WILLIAM SCHLESINGER, PROFESSOR, DUKE UNIVERSITY; AND BRUCE BERTELSEN, EXECUTIVE DIRECTOR, MANUFACTURERS OF EMISSIONS CONTROLS ASSOCIATION

Mr. SCHLESINGER. I'm glad to be here. And thank you for the opportunity to comment on the regulatory impact statements. First, I'm an environmental chemist—sometimes they're now called biogeochemists—on the faculty of Duke University. Over the last 25 years or so, my scientific research has focused on human impacts on the environment. In contrast to much of the earlier testimony dealing with health impacts, I think you could describe my research as dealing with environmental health. I worry about the health of our ecosystems, particularly the chemical quality of nature.

My remarks today will focus on an analysis of the benefits that might be anticipated with the revisions to the standards for ozone and particulates. While I feel that both the impact statements provide a nice quantitative analysis of the human health effects, I believe that the documents significantly understate the benefits of tighter emission standards to natural ecosystems, what I would call the ecology of the environment. And that's the crux of my message: significantly understating the benefits to the health of natural ecosystems.

They are left in the category of unquantified welfare benefits in these documents. I think they're significant. And I'd like to outline a few of those for you. As you may know, the tighter standards for ozone require reductions in the emission of NOx—nitric oxide, which is also called NOx. And I think it is less well known that emissions of NOx, in and of themselves, will have benefits to natural ecosystems. One of those benefits comes from the fact that NOx is a precursor not just to ozone, but to acid rain. And when——

Mr. MCINTOSH. Professor Schlesinger. I don't mean to interrupt you, but for my benefit, can you also tell us how the ozone standard affects the NOx emissions, to draw that link so we keep——

Mr. SCHLESINGER. OK. Most ozone in the lower atmosphere is formed by a reaction of NOx with volatile hydrocarbons in the atmosphere in sunlight. And there's an ample source of volatile hydrocarbons from vegetation over much of the Eastern United States. We supplement that with some emissions from industry. Therefore, the level of NOx becomes critical at determining the rate of the reaction and the amount of the reaction that occurs in sunlight. I would be the first to say that there has always been a level of volatile carbons and a level of NOx in the environment. And the Sun's been shining. So, there's been some level of ozone in the natural environment. And that varies region to region, of course.

But what humans have done is we've essentially doubled globally the emission of NOx. And in the United States it has more than doubled, because we're a major industrial power. And that has increased the rate and the amount of the chemical reaction producing tropospheric ozone in a large portion of the United States. I'll get back to NOx and ozone in a minute, because it ties into the acid rain issue as well. NOx is a precursor to acid rain. NOx is also, when it's deposited, a source of what I would say is "excess" nitrogen deposition in the environment.

That's increasingly becoming a problem both on land and in the waterways. And I want to elaborate on that. But first acid rain. I was surprised to hear Governor Voinovich say that there was no evidence of transport from Midwest to Northeast of substances that might contribute to air quality and, in particular, acid rain quality. It seems to me that there is ample scientific evidence that emissions of sulfur dioxide and NOx in the Midwest are transported to the Northeast.

When NOx is mixed with rain drops, it forms acidity in that rain—nitric acid acidity—and rains out on those systems. In the last 25 years, the Hubbard Brook Experimental Forest in New Hampshire has shown very significant losses of calcium from its soils. And those losses of calcium and elements like calcium—losses of things like potassium and magnesium are well known too—the losses of those elements from soils are well known to cause reductions in forest growth.

And I think that there's really good scientific evidence of the linkage of regional and distance transport to deposition, to leaching of substances from soils, and to reduction of forest growth. In many areas, for instance, the loss of calcium from soils has been associated with an increasing toxicity level of aluminum that's reduced the growth of spruce and some of the trees that Mr. Sanders probably has in his district in Vermont. Beyond acid rain, NOx generates tropospheric ozone by the process I described a minute ago.

That is transported regionally. And it is, over the eastern United States, well in excess of what would be the background level, let's say, in 1700, before humans had such dramatic impacts on the landscape. I think the regulatory impact statements do a nice job quantifying the benefits that would accrue to agricultural production by reducing those ozone levels—that crops will grow better with tighter standards. They don't discuss the same for forests.

And I find it particularly important that as we increasingly look to healthy forests to take up some of the carbon dioxide emitted from fossil fuel combustion, that this will not occur if we are simultaneously poisoning those forests with ozone and acid rain. We need to realize that if we're going to count on temperate forests to take up some carbon dioxide and to slow global warning, they've got to be healthy forests.

Jumping ahead a little bit in my testimony, I'd like to touch on this nitrogen deposition problem. Excess nitrogen—and by that I mean excess over the normal background levels that would be in rain—makes its way to rivers and ground waters and causes and contributes to what we call the eutrophication of those waters, which can be defined scientifically as nutrient enrichment. Often in waterways this leads to blooms of algae, to the loss of bottom water oxygen, and to the death of fish and shellfish. And as we are able to control that deposition, the water quality in bays and waterways should improve.

Some cases in point, atmospheric nitrogen accounts about 25 percent of the run-off nitrogen in New England right now. It's deposited from the atmosphere and makes its way to rivers and into waterways. Direct deposition from the atmosphere accounts for about 12 percent of the nitrogen input to Chesapeake Bay. A recent study that I've just seen in the last week says that it accounts for 67 percent of the nitrogen input to Tampa Bay.

So, controlling NOx in the atmosphere would be a direct way to reduce these excessive levels of nitrogen input into natural waterways, improve their water quality, and restore the fish and shellfish production in some of these areas. Realizing my time is nearly up, I'd just like to summarize it. I think all of these are examples—the acid rain example, the ozone production example, the loss of species and loss of water quality in bays and estuaries—of how regional air pollution by ozone and particulates is seen over large portions of the United States, and that stronger provisions of the Clean Air Act would certainly help ameliorate those conditions.

And my basic message is that I think that these benefits—the benefits that would be seen through the revisions of the Clean Air Act—significantly understate benefits to natural ecosystems upon which we all ultimately depend. Thank you.

[The prepared statement of Mr. Schlesinger follows:]

William H. Schlesinger, Ph.D.

I thank you for the opportunity to comment on the Regulatory Impact Statements for ozone and particulate matter. I am an environmental chemist, sometimes now known as a biogeochemist, employed on the faculty of Duke University. Over the past 25 years, my scientific research has focused on human impacts on the quality of our environment--most frequently on its chemical quality.

My remarks today focus on an analysis of the benefits that might be anticipated with revisions to the national standards for atmospheric ozone and fine particles. While both impact statements provide a careful, quantitative analysis of the human health effects of these pollutants, these documents significantly understate the benefits of tighter emissions standards as far as natural ecosystems are concerned--that is, on the ecology of our environment. Indeed, in each case, ecosystem effects are explicitly left in the category of "unquantified welfare benefits."

As you may know, tighter air quality standards for ozone require reductions in human emissions of nitric oxide (NO_x), and reduced emissions of NO_x, by themselves, will have significant benefits to natural ecosystems. Increasingly, nitric oxide appears as a precursor to the formation of acid rain, in which NO_x forms nitric acid. Not only are there direct effects of acid rain on trees, but the excess nitrogen deposited from the atmosphere leads to significant and potentially harmful effects on forests and natural waterways. In reducing the emissions of

NO_x, the proposed revisions not only reduce the regional concentrations of ozone, and they also provide benefits in the form of lower levels of acid rain and nitrogen deposition.

Let me elaborate a bit: The effects of acid rain are especially pernicious and cumulative in forest ecosystems. Acid rain, derived from the emission and deposition of sulfur dioxide and nitrogen oxides as human pollutants, results in a slow and long-term depletion of nutrient elements from soils, reducing the growth of forests. Dr. Gene Likens (N.Y. Botanical Garden) has shown significant losses of calcium from the Hubbard Brook Forest in New Hampshire during the last 25 years--suggesting that even the 1990 Amendments to the Clean Air Act were inadequate to protect this forest from acidification (Science, 12 April 1996). Reductions in forest growth due to losses of calcium, potassium, and magnesium from forest soils are widely reported in the eastern U.S. and central Europe. In many areas the loss of these nutrients and increases in soil acidity have resulted in the release of toxic levels of aluminum.

As you may know, oxides of nitrogen (e.g., NO_x) interact with other gases to generate ozone in the lower atmosphere--known as the troposphere. Dr. William Chameides (Georgia Tech) has shown that the current level of tropospheric ozone is enough to reduce agricultural production over much of the Midwest and eastern U.S. (Science, 1 April 1994). Indeed, the Regulatory Impact Analysis <u>does</u> quantify reduced crop losses as a welfare benefit resulting from tighter emissions standards. Similar

effects on forests are not, however, quantified as a benefit, and they are likely to be just as important. I note, especially, that as we look increasingly to healthy forests to take up some of the carbon dioxide emitted from fossil fuel combustion, this will not occur if we simultaneously poison these forests with acid rain and ozone pollution.

The deposition of nitrogen from the atmosphere--as ammonium or nitrate--adds nitrogen to soils. You may, as I did, have the initial reaction that this should be favorable to plant growth--acting as a fertilizer. However, an accumulation of nitrogen in natural soils, where plants have evolved to cope with nitrogen-deficits, disrupts the natural processes that allow various species to coexist in nature. Dr. David Tilman (U. Minnesota) has shown dramatic losses of species--plant biodiversity--in response to 12 years of experimental additions of nitrogen to small plots of prairie grassland. In one case, the number of plant species dropped from 15 to 5 (Science, 6 December 1996). This loss of species leaves the natural ecosystem much more vulnerable to fluctuations in climate and other natural disruptions.

The excess nitrogen deposited from the atmosphere also makes its way to the rivers and groundwater that supply most of the freshwater to our population. Excessive amounts of nitrogen and phosphorus lead to the eutrophication of natural waters--defined briefly as "nutrient enrichment." These nutrient-rich waters support unnatural levels, known as blooms, of algae, often later depleting oxygen in the bottom waters and leading to the death of

fish and shellfish. Thus, an unquantified welfare benefit to the proposed revisions that would lower NO_x emissions would be lower levels of nitrogen deposition, lower levels of eutrophication, and improved water quality in many rivers, coastal bays, and estuaries.

Some cases in point: Atmospheric nitrogen supplies about 25% of the nitrogen input to watersheds of the Northeast, where nitrate discharge to coastal estuaries, such as Narragansett Bay, has reduced the biotic productivity and economic potential of the fisheries ecosystem. Certainly there are a variety of sources of nitrogen pollution in estuaries, but Scott Nixon (U. RI) and W.R. Boynton (University of Maryland) have shown that nitrogen deposited from the atmosphere contributes 12% of the nitrogen inputs to the open waters of the Chesapeake Bay estuary (Biogeochemistry, December 1996). One recent study suggests that atmospheric deposition may account for 67% of the nitrogen entering Tampa Bay, Florida! Additional nitrogen, derived from the atmosphere, is also delivered to these estuaries by rivers. In each case, atmospheric deposition contributes to eutrophication and to losses of ecosystem productivity in the estuarine waters.

All these are examples of the kinds of impacts and disruptions that regional air pollution by ozone and particulates inflicts on natural ecosystems--sometimes quite distant from obvious sources of emission. Substantial reductions in the acidity of rain have been achieved by reductions in the emissions

of SO_2 required by the Clean Air Act. However, continuing emissions of nitrogen compounds also contribute to acid rain, to the formation of tropospheric ozone, and to the eutrophication of natural waters. Stronger provisions in the Clean Air Act will help reduce these impacts to our natural environment. The Regulatory Impact Statements submitted for these revisions significantly understate the benefits to the natural ecosystems upon which we all ultimately depend.

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Mr. MCINTOSH. Thank you very much, Professor. I appreciate that testimony. Our final witness on this panel and of the hearing is Mr. Bertelsen. I appreciate you coming by today and testifying on these proposed standards.

Mr. BERTELSEN. Thank you very much, Mr. Chairman, and good afternoon. My name is Bruce Bertelsen and I am the executive director of the Manufacturers of Emission Controls Association. MECA is pleased to participate in today's hearing on EPA's proposed revision to the National Ambient Air Quality Standards for particulate and ozone. Forums like today's hearing provide a meaningful opportunity for the sharing of ideas and views from a variety of perspectives on a matter of considerable interest and importance.

By way of introduction, MECA was founded in 1976 and is a national association of companies probably best known for their manufacture of mobil source emission controls. Its members include leading manufacturers of a variety of emission control equipment for automobiles, trucks, buses, non-road vehicles and engines, as well as catalytic controls for selected stationary sources. These companies, collectively, have decades of experience and a well-established track record in developing and manufacturing highly advanced, cost-effective emission control technology.

MECA supports EPA's efforts to revise the standards for ozone and PM in order to protect the public health. We will leave to the health experts where that level should be. But certainly the process of looking at it with an eye toward protecting the public health is appropriate. And without question complying with more stringent standards for ozone and PM will pose challenges. But we're optimistic that those challenges can be met, and that the goal of clean, healthy air can be achieved.

Emission control technology along with pollution prevention and market-based approaches such as emission trading are available to help make implementation cost-effective. The task currently undertaken by EPA is to set the standards for PM and ozone at levels that are protective of the public health. Congress provided in the Clean Air Act that establishment of the appropriate levels of the standards be kept separate from the process of developing and implementation strategy to attain those standards. And as required by Congress, EPA is to set the levels of the ozone and PM standards that are protective of the public health without basing its decision on cost of complying with those standards.

The costs of compliance will be considered and addressed during the second stage as part of the implementation process. And at that time, the relative cost-effectiveness of various compliance approaches will be paramount. EPA did examine the cost/benefits of its proposal in the agency's RIA for both ozone and PM. And we certainly share EPA's view that it's very difficult to precisely predict future costs of compliance.

But one fact above all in the history of clean air compliance is that today's estimates of future control are often too high, and that the tomorrow's actual cost-effectiveness of controls will be better than today's estimates. Air pollution control technology and overall compliance costs typically decline largely because markets, users, technology suppliers have proven to be better at realizing innovative cost reductions than initially thought. Indeed we have learned

over the 27 years since the 1970 Clean Air Act Amendments were passed that when faced with tough challenges, American ingenuity and a can-do spirit can produce the technology and other compliance options to get the job done while sustaining strong economic growth.

The enormous success of the U.S. motor vehicle program is certainly an excellent example. And looking to the future and the possible need for NAAQS implementation strategies, a large inventory of existing and developing technologies exist to provide greater emission reductions from both stationary and mobile sources. I highlighted some of the technologies our companies are working on in our testimony, and I won't reiterate that here.

Before closing, I would like to make a few comments regarding the potential impacts of revising the standards for PM and ozone on small business. Small businesses play a critical role in the economic health and well-being of this Nation. And the potential impacts of tighter PM and ozone NAAQS on these companies is extremely important. Having said this, we believe that the interests of small business over the years have been, are being, and will be carefully considered before any emission control reduction requirement is established.

Second, the compliance strategies that likely will emerge if the standards are tightened will focus primarily on large emitters, which typically are not small businesses. And finally, there are suppliers of emission controls. A good example of which are companies that manufacture VOC controls, which are typically smaller companies.

In closing, I'd like to say that we appreciate the opportunity to participate, and thank the subcommittee for its efforts to provide a forum for dialog on this important issue. In MECA's view, EPA has taken the proper course by its efforts to establish ozone and PM standards which are truly protective of the public health. And if those standards are revised, the U.S. air pollution control industry stands ready to do our part to help the United States achieve its clean air objectives cost-effectively. Thank you very much.

[The prepared statement of Mr. Bertelsen follows:]

Testimony
of the
Manufacturers of Emission Controls Association
before the
House Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs
on
EPA's Proposed NAAQS for Particulate Matter and Ozone

April 16, 1997

Good morning. My name is Bruce I. Bertelsen and I am the Executive Director of the Manufacturers of Emission Controls Association (MECA). MECA is pleased to participate in today's hearing on EPA's proposed revisions to the National Ambient Air Quality Standards for particulate matter and ozone. Forums like today's hearing provide a meaningful opportunity for the sharing of ideas and views from a variety of perspectives on a matter of considerable interest and importance.

By way of introduction, MECA was founded in 1976 and is a national association of companies best known for their manufacture of mobile source emission controls. Its members include leading manufacturers of a variety of emission control equipment for automobiles, trucks, buses, and nonroad vehicle and engines, as well as catalytic controls for selected stationary sources. These companies collectively have decades of experience and a well-established track record in developing and manufacturing highly advanced, cost-effective emission control technology.

MECA supports EPA's efforts to revise the NAAQS for ozone and PM in order to protect the public health. Without question, complying with more stringent NAAQS for ozone and PM will pose challenges. But, we are optimistic that these challenges can be met and that the goal of clean, healthy air can be achieved. Emission control technology, along with pollution prevention and market-based approaches such as emission trading, are available to help make implementation cost-effective.

The task currently undertaken by EPA is to set the NAAQS for PM and ozone at levels that are protective of the public health. Congress provided in the Clean Air Act that establishment of the appropriate levels of the NAAQS standards be kept separate from the process of developing an implementation strategy to attain those standards. As required by Congress, EPA is to set the levels of the ozone and PM standards at levels that are protective of the public health without basing its decision on the costs of complying with those standards.

Costs of compliance will be considered and addressed during the second stage as part of the implementation process, and at that time the relative cost-effectiveness of various compliance approaches will be paramount. EPA did examine the cost/benefits of its proposal in the Agency's Regulatory Impact Analysis for both the ozone and PM proposals. We share EPA's view that it is very difficult to precisely predict the future costs of compliance. But one fact above all others in the history of clean air compliance is that today's estimates of future control costs is always too high and that tomorrow's actual cost-effectiveness of controls will be better than today's estimates. Air pollution control technology and overall compliance costs typically decline largely because markets, users, and technology suppliers have proven to be better at realizing innovative cost reductions than initially thought.

Indeed, we have learned over the 27 years since the 1970 Clean Air Act Amendments were enacted that when faced with tough challenges, American ingenuity and a can-do spirit can produce the technology and other compliance options to get the job done while sustaining strong economic growth. The enormous success of the U.S. motor vehicle emission control program is an excellent example.

Looking to the future and the possible need for NAAQS implementation strategies, a large inventory of existing and developing technologies exist to provide greater emission reductions from both stationary and mobile sources. For mobile sources, MECA members have developed, and are developing, emission control equipment such as advanced catalyst formulations and washcoats, electrically-heated catalysts, hydrocarbon adsorbers, and thermal management systems which will help light-duty vehicles achieve increasingly low emissions. For diesel engines, MECA companies have developed exhaust control equipment such as oxidation catalysts and diesel particulate filter systems which can substantially reduce PM emissions from both on- and off-road vehicles and engines. Finally, several member companies are hard at work developing catalyst technology that can be used to reduce NOx emissions from diesel engines.

Before closing, we would like to make a few brief comments regarding the potential impacts of revising the NAAQS for PM and ozone on small businesses. Small businesses play a critical role in the economic health and well-being of this Nation and the potential impacts of tighter PM and ozone NAAQS on these companies is very important. Having said this, we believe the interests of small businesses have been, are being, and will be carefully considered before any emission control reduction requirement is established. Second, the compliance strategies that likely will emerge if the NAAQS for PM and ozone are revised will focus on the largest emitters, which typically are not small businesses. Finally, many of the suppliers of controls for emissions that are precursors of ozone and fine particulate are small businesses. For example, for control of volatile organic compounds, one of the precursors of ozone, most of the emission control suppliers are small businesses.

In closing, MECA wishes to express our appreciation to the Subcommittee for its efforts to provide a forum for a dialogue on this important issue. In MECA's view, EPA has taken the proper course by its efforts to establish ozone and PM standards which are truly protective of the public health. If those health-based standards are revised, the U.S. air pollution control industry stands ready to do its part to help the United States achieve its clean air objectives in a cost-effective manner.

Thank you.

Mr. MCINTOSH. Thank you for your testimony. Before I proceed with questions, let me ask unanimous consent to put into the record testimony that was submitted by Governor Engler and Governor Sunquist, although they were not able to come today. If we could include their written statements in the record.

[The information referred to follows:]

Written Testimony Submitted by
Michigan Governor John Engler
to the House Government Reform and Oversight Subcommittee
on National Economic Growth, Natural Resources and Regulatory Affairs
Chairman David McIntosh

April 16, 1997

Thank you for inviting me to share the State of Michigan's perspective on EPA's proposed revisions to the NAAQS for ozone and particulate matter. I am sorry that my schedule precluded my attending the Subcommittee's hearing in person.

We in Michigan support the goals of the Clean Air Act and have been in the forefront of states enacting legislation which is protective of the environment and of human health. In fact, we are proud to point to the significant improvements to air quality which have been made during the past 25 years, not only in Michigan but across the country.

In Michigan, since 1980, the statewide industrial emissions of volatile organic compounds has been reduced from 220,000 tons per year to 80,000 tons per year. Two areas which had been designated as nonattainment areas for failing to meet the national standard for ozone are now meeting that standard, and it has been six years since any area in the state has been in violation of the particulate matter standard.

We are proud of our accomplishments and aware that efforts must continue in order to safeguard the advances we have made and prevent deterioration of air quality in the future. To that end, we

concur and support the Clean Air Scientific Advisory Committee's (CASAC) recommendation that there is a need for more research on fine particulate impacts.

Likewise, we concur with CASAC's recommendation that the ozone standards should take on a more robust form, with an eight-hour average, instead of the current one-hour average.

What we do not and cannot agree with is the Environmental Protection Agency's (EPA) proposal to lower the ozone standard to 0.08 parts per million. This proposed standard provides no significant protection of human health and the environment and yet would trigger the expenditure of millions of dollars on control programs which would offer little air quality benefit.

In Michigan a huge expanse of the lower peninsula would once again be designated as ozone nonattainment areas. It is probable that Michigan would also move from a state with no particulate nonattainment areas to one with many. In fact, in many large cities across the country, the current standards aren't being met. To adopt more stringent standards, throwing areas which have made tremendous efforts to attain the standard out of attainment and requiring even more draconian control measures in areas which have not been able to meet the current standard, is bad public policy.

We believe that since there is no discernible threshold which provided significant health benefits between the current standard and the proposed standard, it is appropriate to consider costs and benefits in setting an appropriate level.

Furthermore, we believe that implementation requirements for any new or revised standards should have been proposed at the same time as the standards, to permit affected parties to assess the true impacts of the proposal. There are many areas of the country where the current standards aren't being met. Additionally, it has now been widely accepted that if new ozone standards or, indeed, current standards are to be met and maintained, regional and national control strategies will be necessary; because ozone precursors are being transported from one area of the country to another. Through the efforts of the Ozone Transport Assessment Group, modeling has been developed which demonstrates the impacts of ozone transportation. Rather than attempting to implement control strategies which inevitably will pit different regions of the country against one another, Congress should be directly involved in developing a cost-effective national control strategy.

We remain concerned about the flexibility which has earmarked much of EPA's approach to implementing Clean Air Act requirements in the past. There is a history of missed deadlines, arbitrary policies, and a total disinterest on the part of EPA for any cost-benefit analysis. We believe the time has come to end this unfortunate reign.

We in Michigan are actively developing partnerships with business and industry and looking to foster cooperation and innovation. We adopted an emissions trading program in 1996 aimed at providing cost-effective flexibility to regulated entities. But, EPA is planning to disapprove this

innovative pollution prevention program. This flies in the face of Administrator Browner's often repeated "new philosophy" which she insists does provide "regulatory flexibility".

Finally, we in Michigan understand the complexity of the issues we are facing and the confusing and sometimes conflicting scientific data we continue to collect. However, we believe the EPA should stop pursing regulatory strategies affecting air quality independently and start working with state and local governments in developing a cohesive strategy aimed at continued progress in improving air quality in a cost-effective way. We believe Congress, in consultation with governor's and local elected officials, should exercise the utmost oversight in any selection of new air quality standards and the implementation of those standards.

Again, thank you for the opportunity to share this information with you. I have also provided the Subcommittee with the attached comments which were submitted by the Michigan Department of Environmental Quality to EPA during the formal comment period on the proposed standards. We appreciate your invitation to share our perspectives on this important issue.

Statement of Don Sundquist, Governor of Tennessee
Before the Committee of Government Reform and Oversight
Subcommittee on National Economic Growth, Natural Resources and Regulatory Affairs
April 16, 1997

Tennessee citizens and children should breathe air that not only meets but exceeds health standards. The air in Tennessee's cities has not always been as clean for our children as we would have liked. So for the past two decades we have studied the problem, adopted standards and spent considerable dollars to improve the quality of air in Tennessee.

The levels of pollutants have been reduced to the extent that there are very few remaining areas in our state where air quality standards have not been attained. This includes ozone, probably the most persistent air quality problem nationally. On October 30, 1996, the last ozone non-attainment area in Tennessee was redesignated as attainment. This progress did not come easily.

Tennessee industry and business have incurred and continue to incur enormous costs for controlling emissions. Many of our citizens have had to accept restrictions on how they use and fuel cars, as well as other changes in their lifestyles. These costs have been great, but our reward, clean air, has been greater.

The EPA has proposed restrictive new standards which are untested, untried and perhaps unworkable. We estimate that as many as 20 counties may not meet the new standards. EPA has not provided a guide for how the air in these counties could actually be improved, but for ozone, it certainly would mean Tennesseans subjected to more controls over the use of personal lawnmowers, cars and boats, and significantly higher

electricity costs. It may also mean restrictions on household products like paint, hair spray, deodorant, auto antifreeze, floor wax, insect repellent, and aftershave.

For fine particulates, controls could include telling farmers when they can plow and requiring local governments to pour water on country roads. It could also keep citizens from having fires in their fireplaces or wood stoves.

TVA estimates that compliance with these standards could increase energy costs in the Tennessee Valley by 11 per cent and result in the loss of 40,000 to 50,000 jobs.

This may well be a reasonable and appropriate sacrifice for Tennesseans to make if there are actual, meaningful improvements in the health of many of our citizens.

The problem we have is, there seems to be no assurance at all that any improvement in health will come from the proposed standards. Responsible scientists flatly disagree. I understand that members of EPA's own Clean Air Scientific Advisory Committee have questioned the need for the standards or other aspects of the proposals. Even EPA has acknowledged that the benefits of the proposed standard are highly uncertain.

While there is debate as to what it may cost to implement these proposals, there is no question that the burden, both in economic terms and lifestyle disruption, would be great. Tennesseans are enjoying unprecedented prosperity, but it can quickly be undermined by excessive regulation and unjustified controls.

Well-paying jobs mean health care benefits and preventive health care measures for Tennessee's families. If severe enough, economic disruptions can themselves have adverse health consequences. Government, with a shrinking tax base, may not be able to

deliver needed services. Our most vulnerable citizens would feel most directly the economic impact and lifestyle disruption were the proposed standards required.

We are further concerned about the practicality of implementing a network to monitor these standards. EPA has not approved any equipment measuring these fine particulates.

Likewise, there is serious disagreement as to whether the proposed ozone standards, in some cases very near background levels, provide more than marginal additional protection.

We have broad support in Tennessee for a clean environment. This support comes in large part from the realization that the sacrifices we make actually produce the results intended. Our concern about these new standards is that they risk losing that support by critically impacting our citizens without first providing them with the assurance of any observable benefits.

Most troubling is the lack of objective scientific evaluation and basic research. A consensus must build that the measures adopted are appropriate. Without this consensus, and its underlying premise, the consent of the governed, the dramatic environmental progress in air and water quality which we are continuing to make is threatened.

We simply don't need to rush to adopt new standards which will significantly impact the lives of our citizens without full assurance that these standards are workable, based on sound science and, most importantly, will improve their health.

Mr. MCINTOSH. Let me ask both of you, if I might, if you could comment on the following conclusions of the White House Council of Economic Advisors in their comments to EPA's regulatory impact analysis, which I'll ask unanimous consent we put the entire document that was supplied to us by OMB into the record.

[The information referred to follows:]

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF CHIEF COUNSEL FOR ADVOCACY

November 27, 1996

The Honorable Christopher S. Bond
Chairman
Committee on Small Business
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In light of recent interest about EPA's plans to include small entities in the Agency's National Ambient Air Quality Standards (NAAQS) rulemakings, we are writing to inform you about our joint plans to involve small entities in the process of setting and implementing any new NAAQS for ozone and particulate matter.

As you may be aware, there continues to be disagreement over the question of whether or not rulemakings setting or revising the NAAQS are subject to the requirement of the Small Business Regulatory Enforcement Fairness Act (SBREFA) to convene a Small Business Advisory Panel. Fortunately, we do not need to settle that issue to ensure that small entities have the opportunity to provide their comments and advice regarding the NAAQS. However the legal question is resolved, we nonetheless intend to do everything we can to fulfill the spirit of SBREFA on a voluntary basis.

After the proposal of new air quality standards for ozone and particulate matter, EPA, the Small Business Administration, and the Office of Management and Budget will hold two separate panel exercises to collect comments, advice and recommendations from representatives of small businesses, small governments, and other small organizations. The first panel, soliciting comments on the new standards themselves, will be held immediately after proposal. This panel will be carried out using a panel process modeled on the "Small Business Advocacy Review Panel" provisions in Section 244 of SBREFA. The second panel, covering implementation of the standards, will be held a few months later. EPA is also adding a number of small-entity representatives to its Federal advisory committee focusing on NAAQS implementation; we expect the small-entity advice from this committee will help the aforementioned implementation panel accomplish its purpose.

In summary, EPA is taking small-entity concerns seriously in these rulemakings. EPA's Air Office has long had a policy of finding ways to ease the burden on small entities, and we look forward to working with you to do an even better job in the future.

Mary Nichols
Assistant Administrator for Air and Radiation
U.S. Environmental Protection Agency

Jere Glover
Chief Counsel for Advocacy
U.S. Small Business Administration

cc: Sally Katzen, OMB
Art Fraas, OMB

Mr. MCINTOSH. "EPA's regulatory impact analysis underestimates the true cost of the ozone program by an order of magnitude. The cost of full attainment could be up to $60 billion annually. The cost of ozone could dwarf any expected benefits, as listed in EPA's regulatory impact analysis, and it would be necessary to spend from $30,000 to $80,000 per ton and not EPA's estimated $3,000 to $10,000." If you all could comment on that.

Mr. SCHLESINGER. I'm more of an expert on benefits, I think. I could not confirm or deny that they've underestimated the cost. I would say with some confidence, as an environmental scientist, that they have underestimated the benefits to natural ecosystem.

Mr. MCINTOSH. OK. Thank you. Mr. Bertelsen.

Mr. BERTELSEN. The cost is always an issue of considerable debate. I think I would tend to agree that as difficult as it is to quantify costs, it's probably more difficult to quantify benefits. But there's a lot of healthy disagreement about relative cost. I guess I can't comment directly on that statement. The observation I can provide, based on experience that we've seen over the years, is that typically EPA's estimates tend to be a little higher than what turn out to be the actual compliance costs. But with regard to the discussion of those two bodies, I really have nothing further we could add.

Mr. MCINTOSH. Let me ask a slightly different question. Mr. Bertelsen, this really goes to your testimony, but EPA's analysis indicates that in many cases the standards may be infeasible to achieve the actual new standard, and they have not really identified controls and actual mechanisms that could be used to achieve those standards. Are you comfortable saying that, given current technology, that we would be able to meet these standards in each of the counties that would be in non-attainment?

Mr. BERTELSEN. Well, I think the way I would answer that question—because at this point, we're not sure what the standard would be, and in order to—once the standards are set, it's going to involve a fairly comprehensive compliance strategy, which is going to involve a lot of things, of which technology will play, we hope, an important and positive role. But I do think that looking to the future, there are a large number of technologies that exist and technologies that are coming along that will help reduce emissions—I'll speak to my area, which is in the area of motor vehicle emissions.

And, indeed, right now, EPA has a number of initiatives underway in the motor vehicle area. Just to cite a couple of examples, in the heavy duty area, both on-highway and off-highway, very comprehensive programs that have been proposed or are about to be proposed for both highway vehicles and non-road engines. And, actually, both of those regulatory initiatives were developed with the cooperation of the engine manufacturers and, I guess, California Resources Board, as well as the State of California. So there are things that are on the horizon that will help reduce emissions. We think there are——

Mr. MCINTOSH. Are you saying those would be sufficient to meet the new standards?

Mr. BERTELSEN. No. I'm saying we're moving in the direction of reducing emissions. I can't say precisely that—I'm not expert

enough to speak to every strategy. So I couldn't answer that question.

Mr. MCINTOSH. One of the things that we found troubling with EPA's analysis is that they couldn't point to a combination of strategies and actual implementation steps that would lead to compliance with the lower standards. And so you've got a situation where you impose tremendous costs and consequences in these communities. For example, they're limited on their ability to build new infrastructure highways under the current law without any prospect that you'll actually meet the standard that the EPA is proposing.

Mr. BERTELSEN. Could I perhaps try to shed some light using some prior experience that might be helpful? Typically what happens is, it's more typical with an emission standard—but when a regulatory requirement is established, it creates a benchmark which stimulates a lot of interest to develop technologies. And often solutions that we aren't even aware of today or that we would guess would be implemented are developed. And that's kind of the, I guess, the wonder and the magic of the Clean Air Act.

Looking back to 1970, which is frankly before my time, I don't think the folks at the time had any concept of the types of technologies and advances and solutions that would come up—that would be developed. But what happened was the challenge was put in place to develop—the challenge was there to clean up the air. And suppliers and manufacturers and others responded to the challenge. So no, I can't say today that I have the menu of options for meeting the standard. But what I would say is that based on prior history, I'm optimistic that there's a lot of people out there that work very hard to come up with cost-effective solutions.

Mr. MCINTOSH. I'll yield back the remainder of my time. Mr. Sanders, do you have any questions for this panel?

Mr. SANDERS. I do. Thank you very much, Mr. Chairman. Gentlemen, I think you know that in the political world, some of us—not me, but always the other guys—are prone to exaggerations. And we've heard today that cows will now be wearing diapers. Probably there will be no more agriculture in America if these regulations are passed. The Midwest will not have any more jobs. I'm exaggerating their exaggerations. But let me start off—Mr. Bertelsen, in the past it seems to me that whenever EPA or probably in any State, environmental regulations have been proposed, we usually hear the same type of response: the world will come to an end, if not today, at least next year, nobody will be able to work, and so forth and so on.

And sometimes in these arguments history certainly does not prove them out. In 1990, for example, the Clean Air Working Group—and that was a pro-industry group, as I understand it—estimated the cost to industry would be $51 to $91 billion a year when, in fact, compliance costs are only about $22 billion a year. I mean, that's a lot of money, but it is, very significantly, between 57 and 75 lower than the estimate.

The electric utilities—again, we're talking about the 1990 period—estimated that the cost of the acid rain provisions would be between $1,000 to $1,500 per ton of sulfur dioxide, when, in fact, it ended up only costing $100 a ton. And the Petroleum Marketers

Association of America estimated the cost of installing vapor recovery hoses at three times the actual cost.

Could you give me some more examples, perhaps, of when costs were overstated or when technological advances rose to the challenge of stricter standards? In other words, I think one of the points that you make is when there are standards there, lo and behold: new technology.

Mr. BERTELSEN. Yes.

Mr. SANDERS. New creative processes.

Mr. BERTELSEN. I think I can give you a couple of examples on the mobile source side. Just by way of introduction, to try to explain why this happens, one of the reasons—the question could be asked, why is it that industry and even in some cases, EPA, overestimates the cost of compliance. And to give you sort of a very simple illustration, at least in my view, why that happens: when you're looking at a future requirement, you say, "Well, now how do I get there? How can I get there today? And perhaps that means I can take technology A, technology B, technology C, put them all together, and use all three of them. Then I'm pretty confident that I'm going to get there."

And I'll give you an example of this. But, in reality, as time moves on, perhaps technology A is optimized. Perhaps it turns out you only need technology A and B. Perhaps technology D comes along. And let me give you a couple of examples. When EPA—and this would probably be back around 1988–1989—was looking at the costs of complying with the tighter hydrocarbon standards in the Tier 1 standards, and the fact that the useful life requirements were being expanded, the estimate they used, if I recall correctly, was around $500. And that was based on the concept that perhaps you would have to replace the catalytic converter after 50,000 miles.

That was one possible strategy that would get you there. And what we've seen, of course, is that the vehicles that have come out in 1994 and afterwards and meet the standards, in fact, do not require replacement converters. So, that's one where you can see a cost savings. Another example—right now there is a lot of discussion about the negotiations between the Northeast States and the auto manufacturers to adopt a national LEV program, which is a voluntary program that EPA has supported, when that program is really based on a set of California standards—LEV standards.

When those standards were first adopted by California in 1990, the estimates of complying with those standards, by some accounts, was over $1,500. I think California now estimates that the incremental cost increase in meeting those standards is somewhere around $150. I'm sure the auto manufacturers would debate that it's not as low as $150. But I think everyone would agree that directionally it has come down.

Mr. SANDERS. So what you're suggesting is that when the Government adopts standards, lo and behold, very often industry is capable of developing sophisticated technology which ends up being a lot more cost-effective than otherwise had been thought?

Mr. BERTELSEN. Yes. What happens is that you, basically, by setting the standard, you create an incentive. And it's on the part of

the regulated industry, but also on the part of those who are developing technologies to come up with cost-effective solutions.

Mr. SANDERS. Right.

Mr. BERTELSEN. And really the solutions that win—I'll use the motor vehicle example again—if you have competing technologies as strategies, the one that's going to prevail is going to be one, the one that gets the job done; two, is the most cost-effective; and three, has the least impact on the driving public.

And those are kind of the triple challenges when you're developing a technology that you try to address. And it's, again, it's the marketplace at work.

Mr. SANDERS. Let me interrupt you. I would like to ask Dr. Schlesinger a question. Doctor, earlier I introduced some of the non-monetized benefit categories. And I think you touched on that issue as well. The issue is more complicated. And we all understand that. Who in God's name has the foresight to be able to anticipate all of the costs or all of the benefits. I don't know that anybody does. And we do the best that we can, I suppose, in trying to guess. But are you saying that the proposed standards will not only benefit human health, but will also help prevent acid rain and will help promote plant and animal diversity, which is an issue of great importance to the State of Vermont?

Mr. SCHLESINGER. No question about it. Any reduction in NOx will reduce the level of acid rain in regions downwind of emission, including Vermont and New Hampshire. Any reduction in the emission of NOx will reduce the deposition of nitrogen to natural ecosystems. Very nice sets of experiments show that added nitrogen reduces the diversity, both on land, where there's some nice work showing that added nitrogen significantly reduces plant species diversity as well as in waters and estuaries, where it reduces the diversity and economic potential of fish and fisheries. So I think those are very solid although non-monetized benefits that would be realized.

Mr. SANDERS. Thank you.

Mr. MCINTOSH. Thank you, Mr. Sanders. Seeing no other members of the committee—and I want to say thank you to our final panel for your input. And also thank you to the members of the second panel who waited around. Mr. Kucinich indicated to me that he had no additional questions at this point.

Mr. SANDERS. Let me just thank you, Mr. Chairman. I think this was a well-done hearing and I think we all gained something from it.

Mr. MCINTOSH. Well, thank you. I appreciate it. I do want to sincerely thank you and your staff for helping to put it together. I thank Mildred Webber and Larisa Dobriansky and our staff for the good work that they've done. It is only the beginning of our hearing, because we're now going to be in recess until Wednesday, April 23, at 10:30 a.m., in room 2247, where we will hear from some of the representatives of the U.S. Government on these same issues. Thank you very much.

[Whereupon, at 2:30 p.m., the subcommittee recessed, to reconvene at 10:30 a.m., Wednesday, April 23, 1997.]

[Additional information submitted for the hearing record follows:]

FRANK F. McDONALD II
MAYOR
CITY OF EVANSVILLE, INDIANA
Testimony
Hearing on
Ozone and Particulate Matter
National Ambient Air Quality Standard
United States House of Representatives

Indiana cities and towns are extremely concerned about the effect the more stringent ozone and particulate matter attainment standard will have upon its citizens and local business. Our cities and towns have worked very hard to reduce air pollution and meet clean air requirements. While it has come at a cost, clean air is important to all of us.

Evansville and Vanderburgh County in southwestern Indiana, in recent weeks, have been the subject of a USEPA proposal for redesignation as attainment for ozone. This redesignation is currently under a sixty (60) day comment period. The local community is working with the Indiana Department of Environmental Management (IDEM) on specific projects and programs from a mandatory maintenance plan from IDEM that will hopefully result in a greater ability to obtain readings below the current ozone standards.

The proposal to lower the existing standard, in essence, forces many communities to start all over again. These tougher attainment standards will expand the number of non-attainment areas and result in the implementation of emission controls in other areas. This would impose significant economic, administrative, and regulatory costs on all of Indiana's citizens, businesses, and local governments.

In recent years, the cities of South Bend, Elkhart, and Indianapolis were redesignated attainment areas. Evansville is on the verge of being redesignated an attainment area. They literally have spent millions of dollars to regain that status. The lower standard places as many as 100 cities and towns into non-attainment status. This would severely hamper economic development efforts, our ability to compete for highway construction funding, and dramatically increase the cost of funding current air quality programs. Indianapolis alone could see an increase of over $18 million dollars the first year with continued annual costs of nearly $12 million dollars per year.

Therefore, on behalf of Evansville and all of Indiana's cities and towns, we are urging Congress to thoroughly evaluate all of the potential consequences. To this end, a targeted research program should be implemented to address the many unanswered questions and uncertainties that surround the particulate matter standard.

Congress recently passed legislation prohibiting unfunded mandates without comprehensive consideration. Changing the existing ozone and particulate matter attainment standard increases costs to local governments without providing a way to pay for them. At a minimum, retaining existing standards should be included in the options that USEPA considers.

Thank you for allowing the opportunity to present this testimony for the record.

EPA'S PARTICULATE MATTER AND OZONE RULEMAKING: IS EPA ABOVE THE LAW?

WEDNESDAY, APRIL 23, 1997

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH,
NATURAL RESOURCES, AND REGULATORY AFFAIRS,
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:35 a.m., in room 2247, Rayburn House Office Building, Hon. David M. McIntosh (chairman of the subcommittee) presiding.

Present: Representatives McIntosh, Sununu, Snowbarger, Barr, Sanders, Tierney, Kanjorski, and Kucinich.

Ex officio present: Representative Waxman.

Staff present: Mildred Webber, staff director; Todd Gaziano, chief counsel; J. Keith Ausbrook and Larisa Dobriansky, senior counsels; Karen Barnes, professional staff member; Cindi Stamm, clerk; Phil Barnett, minority chief counsel; and Elizabeth Mundinger, minority counsel.

Mr. MCINTOSH. The Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs will come to order for a continuation of our hearing from April 16th.

Ms. Browner, thank you for joining us. Go ahead and have a seat.

Ms. BROWNER. We thought we were going to be sworn in.

Mr. MCINTOSH. We can do that. Usually, we go through opening statements and then swear you in; but we will start out that way, yes.

[Witnesses sworn.]

Mr. MCINTOSH. Let the record show that the witness answered in the affirmative.

And I understand, Ms. Browner, you have a commitment at 12:30; so we will do our best to make sure there is plenty of time for your testimony and questioning to be able to try to accommodate you.

Ms. BROWNER. We will make available whatever time the committee needs. I am more than happy to stay later if that is helpful to the committee.

Mr. MCINTOSH. Thank you.

By unanimous consent, each side will have 10 minutes of opening remarks; and the subcommittee clerk, Cindi Stamm, will be keeping time and will let me know as to how much we have on each side.

I understand, Bernie, in addition, at the end of the 5 minutes, first round of 5-minute questions, we will have a 15-minute question and answer period that you and I will allocate back and forth.

Mr. SANDERS. Right.

Mr. MCINTOSH. Let me begin now with my opening statement.

The purpose of today's hearing is to question several Clinton administration witnesses on whether EPA has engaged in an illegal rulemaking procedure to impose burdensome, new standards for particulate matter and ozone.

Let me be clear: I do believe that EPA's proposal is a regulatory fraud, that there may be a terrible price to pay in terms of human health if EPA does not start over and follow the law. EPA's violations of regulatory law throw the entire rulemaking into question. The confusion and the litigation that is surely to follow will undermine the considerable progress that has been made to date to clean the air.

We have heard testimony from communities that are currently working hard to clean the air we breathe under the current standards, and I understand that they may be forced to put their clean air programs on hold because of years of uncertainty and litigation over the new standards. And, in the end, the court will have no choice but to throw out these rules because of the illegal procedures that are being followed.

With great reluctance, I have concluded that in developing these standards, EPA has violated various Federal laws and Executive orders as well as administrative procedures. Among the problems are as follows.

EPA has failed to follow the Regulatory Flexibility Act. The Agency refused to fully evaluate the impact of its proposed rules on small businesses and small entities, despite a finding by the controlling legal authority, the Small Business Administration, that EPA is required to do so.

EPA has violated the Unfunded Mandates Reform Act. Specifically, evidence shows that EPA refused to conduct a complete cost-benefit analysis or to select the most cost-effective option among the reasonable alternatives to achieve the objectives of the Clean Air Act.

EPA continues to refuse to obtain, examine or release the data of the underlying key studies on which the Agency is relying, even though the studies were funded with taxpayer money.

And EPA appears to have collaborated with OMB to impose a gag order on other agencies' written comments in the official record for the proposed rules.

What is the consequence of these actions? Well, these laws have been enacted by Congress and signed by President Clinton to assure that certain things happen: First, that the proposed rules actually do maximize protection to health and the environment; and that good science is publicly available for all to see. Second, when there are several alternatives, we pick the best one. And, third, that the rights of all Americans be heard and are protected in the process.

When EPA fails to follow these procedural laws and the objectives are not met, the result is that the health of Americans is made worse by the regulations.

Now, what are the alternatives to this rulemaking? It is important to note that there are clearly better investments that can be made to promote public health. Eight billion dollars could save three to four times as many women from breast cancer by paying for mammograms. Or we could pay for more asthma research and pay for asthma medicine for all the Nation's asthma sufferers—not just a fraction of 1 percent of those asthma patients that the Agency says it will help with this ineffective and illegal rulemaking.

In sum, America cannot breathe easier until EPA has fully complied with the law. I do believe that EPA's proposal is a regulatory fraud and that there may be a terrible price to pay in terms of human health if the Agency does not start over and follow the law. EPA's violations of regulatory law throw the entire rulemaking into question, and the confusion and litigation that will surely follow will undermine the considerable progress that has been made to date to clean the air.

As I mentioned earlier, communities that are currently working hard to clean the air we breathe under the current standards may be forced to put these programs on hold or those who don't want to see them go forward will gain an upper hand in getting them to delay efforts to put new programs into place because of the uncertainty and litigation over the new standards. The courts, in the end, will have no choice but to throw out these new rules because of the illegal procedures.

We must do better to clean the air and ensure that these regulations are above question so that we can truly go forward in protecting the environment for all Americans.

[The prepared statement of Hon. David M. McIntosh follows:]

Statement of Chairman David M. McIntosh
Subcommittee on National Economic Growth,
Natural Resources, and Regulatory Affairs
On
"EPA's Particulate Matter and Ozone Rulemaking:
Is EPA Above the Law?"
April 23, 1997

The purpose of today's hearing is to question Administration witnesses on whether EPA has engaged in an apparently illegal rulemaking procedure to impose burdensome, new standards for particulate matter and ozone. Let me be clear: I believe EPA's proposal is a regulatory fraud and that there may be a terrible price to pay in terms of human health if EPA does not start over and follow the law. EPA's violations of regulatory law throw the entire rulemaking into question. The confusion and litigation that will surely follow will undermine the considerable progress that has been made to date to clean the air. Communities that are cleaning the air we breathe under the current standards may be forced to put clean air programs on hold because of years of uncertainty and litigation over the *new* standards. And in the end, the court will have no choice but to throw out these illegal rules.

Reluctantly, I have concluded that, in developing these standards, EPA violated various federal laws, executive orders, and administrative procedures. Among the many problems:

- EPA has refused to allow an adequate opportunity for public comment on its proposed rules or to allow an adequate opportunity for regulatory review under President Clinton's regulatory review executive order.

- EPA has violated the Regulatory Flexibility Act. The Agency refused to fully evaluate the impact of its proposed rules on small businesses despite a finding by the controlling legal authority, the Small Business Administration, that EPA is required to do so.

- EPA has violated the Unfunded Mandates Reform Act. The Agency refused to adequately involve state and local officials in the development of the standards. Specifically, evidence shows that EPA refused to conduct a complete cost-benefit analysis or to select the most cost-effective option among all reasonable alternatives that achieve the objectives of the Clean Air Act.

- EPA continues to refuse to obtain, examine, or release the data underlying the key studies on which the Agency is relying, even though the studies were funded with the taxpayers' money.

- EPA appears to have collaborated with OMB to impose a "gag order" on other agencies' written comments on the proposed rules.

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What is the consequence of EPA's actions? These laws have been enacted by Congress to ensure certain things happen: First, that the proposed rules actually do maximize protection to health and the environment. And that good science is publicly available for all to see. Second, that when there are several alternatives, we pick the best one. And third, that the rights of all Americans to be heard are protected in the process. When EPA fails to follow the law, these objectives are not met. The end result is that the health of all Americans is made worse by illegal and improper rulemakings.

What are the alternatives to this illegal rulemaking? It is important to note that there are clearly better investments that can be made to promote public health. Eight billion dollars could save 3 to 4 times as many women from breast cancer by paying for mammograms. Or we could pay for asthma research and the asthma medicine for ALL the nation's asthma sufferers -- not just a fraction of one percent of asthma patients that EPA says it will help with its ineffective and illegal rule.

In sum, America cannot breathe easily until EPA has fully complied with the law. I believe EPA's proposal is a regulatory fraud and that there may be a terrible price to pay in terms of human health if EPA does not start over and follow the law. EPA's violations of regulatory law throw the entire rulemaking into question. The confusion and litigation that will surely follow will undermine the considerable progress that has been made to date to clean the air. Communities that are cleaning the air we breathe under the current standards may be forced to put clean air programs on hold because of years of uncertainty and litigation over the *new* standards. And in the end, the court will have no choice but to throw out these illegal rules.

Mr. MCINTOSH. Mr. Sanders.

Mr. SANDERS. Mr. Chairman, thank you very much. I think this is going to be an interesting hearing. You and I have one or two just tiny, minor disagreements. Basically, I disagree with everything you said.

Mr. Chairman, it seems to me that there are three basic issues that we have to examine today.

No. 1, if we upgrade the standards regarding ozone and particulate matter, we would prevent an estimated 15,000 premature deaths a year and 250,000 respiratory problems in children each year. I repeat—let's be clear about this—15,000 deaths and 250,000 respiratory problems. Some of these are very painful, frightening problems for the kids.

Mr. Chairman, the second question that we have to ask is a very simple one, probably the heart and soul of this whole debate: Has the EPA done good science in coming up with their conclusions? This is a difficult issue for many of us because we are not scientists or experts in particulate matter, ozone or respiratory problems. We have to rely on experts.

So the very simple question we have to ask ourselves is whether this research and these conclusions are reliable. Have they been done by reputable scientists? Are they based on peer review study? Or is this work simply an effort by irresponsible, ill-trained extremists who are trying to frighten us and, for some unknown reason, are trying to make life difficult for various elements of American industry?

That is the most important question. I hope Ms. Browner will address that issue.

Now my understanding is—this is my conclusion—is that these new EPA proposed standards were based on some 5,000 studies by some of our best scientists, that there was widespread public input and that these studies have all been peer reviewed and published in independent scientific journals.

Furthermore, my understanding is that the relevant scientific studies have been reviewed extensively by a group of independent scientific advisors called the Clean Air Scientific Advisory Committee, CASAC, and that CASAC's members concluded that the EPA had done "an adequate scientific basis for regulatory decisions." In fact, my understanding is that Carol Browner recently stated, "This has been the most extensive scientific review and public outreach process ever conducted by EPA for public health standards," and that the EPA reviewed, again, many thousands of peer review studies. It sounds to me like we are in to serious science.

So the first and most important question is, is the EPA's work scientifically valid? And, to me, it seems it is. It seems they did what they were asked to do.

Now, the third issue, Mr. Chairman, is really a very simple one, very simple philosophical issue, and that is, if the EPA and the thousands of scientific studies are correct and if 15,000 people are dying unnecessarily each year and if 250,000 children are being made ill each year unnecessarily, then clearly, as Americans, as human beings and people with a soul, we have got to conclude that this is unsatisfactory, it is unacceptable and it has to end.

Mr. Chairman, if there was some terrorist organization in this country killing 40 people every day for an entire year, the American people would be outraged, the U.S. Congress would be outraged, and I can assure you that action would be taken immediately to stop the slaughter. And if over 600 children a year were being hurt by these terrorists, believe you me the Congress would act immediately.

Mr. Chairman, I am not aware of where in our Constitution or in our laws we allow innocent people to be killed or injured. I am not aware that certain individuals who may happen to own companies are allowed to cause so much pain and so much suffering.

I think the last point that we wanted to touch on—I am sure Ms. Browner will get into it—is what her charge is. We are all concerned about finding cost-effective solutions to these problems, but she is mandated by the U.S. Congress to give us an objective analysis of public health problems, and I believe that that is what she has done and done well.

Thank you, Mr. Chairman.

Mr. MCINTOSH. Thank you, Mr. Sanders.

I understand that on the majority side we have 6½ minutes left. Let me just briefly use 30 seconds of that to say I, too, agree that we have to do everything possible to help people who are suffering from asthma and other consequences of dirty air. My greatest fear is that, by not following the proper procedures, that those efforts will be put on hold and, in fact, could go backward in this country.

Let me now yield to our vice chairman, Mr. Sununu, for his opening statement.

Mr. SUNUNU. Thank you, Mr. Chairman. Certainly I want to take the time to thank the panelists for being here with us today.

I share the concerns that I think all the members of this subcommittee share and that is for the quality of life and the quality of health that people in America can enjoy. Certainly, I share the concern of setting standards for air quality that will measurably improve our health and quality of life.

In doing so, I think we would agree as a community that these same standards need to meet at least two principal objectives. First, they have to have the greatest positive impact only the health of our most vulnerable citizens, primarily the old and the young; second, I think these standards need to be based on sound scientific principles and data, as was emphasized earlier.

The first of these objectives, protecting health, is one of a personal nature in that I have several family members who are afflicted with the kinds of respiratory problems, asthma, that we will hear about quite a bit today.

Second, my experience as an engineer reinforces the critical importance of sound scientific support for any new regulation or rule that could affect every aspect of our daily lives.

In particular, I believe that the basis for such sound science should address several questions: First, is the data that we base our conclusions on accessible by all, open to the public and open to review and evaluation? Second, have we included all the available and pertinent studies in the review process and for evaluation? And, finally, have our elected and appointed officials listened to the

valued advice of experts, rather than simply pursue a political or predetermined agenda or solution?

In summary, I feel that in pursuing a sound scientific basis for regulation, we need to be open, we need to be fair, and we need to listen to those who understand the issues and the scientific data better than we may. These attributes are essential to a process that ultimately should benefit our families and communities across the country.

I hope that the discussion today will address these important issues and others as well, and I look forward to hearing from our panelists.

Mr. MCINTOSH. Thank you very much, Mr. Sununu.

Mr. Sanders.

Mr. SANDERS. Mr. Kucinich.

How much time do we have left?

The CLERK. The minority has 6 minutes.

Mr. KUCINICH. I will just need about a minute.

I want to say that I am particularly intrigued in the debate over clean air to hear some of the novel solutions which those who are attacking the EPA have for improving the health of the people in this country. For example, when confronted with the difficulty that some people may have in breathing if we do not have stronger air quality standards, one official in Ohio stated that perhaps what we need to do is provide more air conditioners for people.

Now, that is a novel way of looking at this, and certainly we have many creative people taking part in this debate.

We also had someone testify before this committee who suggested that maybe the asthmatics might simply use a bronchial dilator an extra time a day when they are having the worst air quality. That, too, is a novel way of looking at this.

Certainly, there are ways that the public can become involved in protecting their own health. We in Congress have a responsibility to protect the public health through creating laws which will do so.

I noticed there has been some upside-down thinking throughout this debate, for example, saying that bronchial dilators ought to replace air quality standards and air conditioners ought to be used instead of laws to protect the air. And I contend, Mr. Chairman and members of this panel, that what is plaguing this Nation right now is not the junk science which so falsely has been labeled to refute the EPA's position, but I think what we are facing here is an attempt to junk the rights of the American people to clean air.

So I am going to be listening very carefully as a former asthmatic, by the way. I suffered from asthma as a child, and I have a particular sensitivity to this issue. On behalf of many asthmatics, I am going to be listening to this debate with great interest. Maybe if the air standards don't work, maybe what we can do is get air conditioners and bronchodilators and pass them around the country for everyone. Either way, it is going to be great for the economy.

Mr. MCINTOSH. Thank you, Mr. Kucinich.

Let me turn now to Congressman Vince Snowbarger.

Mr. SNOWBARGER. Thank you, Mr. Chairman.

Real quickly, I appreciate the panelists being here today and thank the chairman for the time.

My concerns today are going to be really focused on the small business issues, particularly the Regulatory Flexibility Act and the Small Business Regulatory Enforcement Act, SBREFA.

My main concern is that I don't feel that EPA has done what it needs to to comply with those acts. I feel like they have tried to circumvent both of the acts. In specific, EPA has failed to convene small business advocacy rule panels pursuant to SBREFA and failed to prepare initial regulatory flexibility analysis when published in a proposed rule. I am concerned that that is going to have an impact on the 26,000 small businesses in my district that have already worked very hard to comply with the 1990 Clean Air Act amendments, and I think it is unfair they have not had an opportunity as provided by Congress to impact these decisions.

I would like to insert into the record, Mr. Chairman, two resolutions that were adopted by the Kansas Legislature with regard to proposed standards: Senate Concurrent Resolution 1608, which urges EPA to continue studying the need for the changes in acts and to approve changes only after a cost-benefit analysis and risk assessment; and Senate Concurrent Resolution 1609, which was responding to the legislature's concerns about the ozone transport assessment group.

Additionally, I would like to insert the comments provided by the Kansas Department of Health and Environment, including their preliminary analysis on the impact on Kansas.

Mr. Chairman, I would ask unanimous consent that they be submitted for the record.

Mr. MCINTOSH. Seeing no objection, they will be made part of the record.

Mr. SNOWBARGER. Thank you for the time.

Mr. MCINTOSH. Thank you.

[The information referred to follows:]

VINCE SNOWBARGER
3D DISTRICT, KANSAS

Congress of the United States
House of Representatives
Washington, DC 20515–1603

Committee on Government Reform and Oversight
Subcommittee on National Economic Growth, Natural Resources, and Regulatory Reform
"Is EPA Above the Law"
April 23, 1997

Statement of Congressman Vince Snowbarger

Thank you, Mr. Chairman. I would like to thank the Chairman for this opportunity to continue discussion on the Environmental Protection Agency's (EPA) proposed changes to the National Ambient Air Quality Standards regarding ozone and particulate matter. Additionally, I would like to thank the witnesses for taking time to be here today. I look forward to their testimony and am eager to discuss this serious matter.

Although EPA has disregarded several federal laws with this rulemaking, I am particularly concerned about violations of the Regulatory Flexibility Act (Reg Flex) and the Small Business Regulatory Enforcement Fairness Act (SBREFA). This is especially important to me, as a member of the Small Business Committee, because EPA's proposed rules will devastate small business and family farms. Our small business owners are already burdened by cumbersome capital gains taxes, unfair death taxes, and increasing over-regulation.

Several of EPA's actions lead me to believe that they have attempted to circumvent both of these Acts. Among these actions:

- EPA failed to convene Small Business Advocacy Review Panels prior to issuance of the proposed rule as required by SBREFA.
- EPA failed to prepare an initial Reg Flex analysis when it published the proposed rule.

Imposing these additional regulatory mandates, that violate Reg Flex and SBREFA, on the 26,176 small businesses in my district, that have worked hard to comply with the 1990 Clean Air Act Amendments, is unfair.

I would like to insert into the Record two resolutions adopted by the Kansas Legislature with regard to the proposed standards. Senate Concurrent Resolution No. 1608 urges the EPA to continue studying the need for changes in the NAAQS, but to approve changes only after a cost benefit analysis and a risk assessment. Senate Concurrent Resolution No. 1609 responds to the Legislature's concerns about the Ozone Transport Assessment Group (OTAG). Additionally, I would like to insert comments provided by the Kansas Department of Health and Environment, including their preliminary analysis of the impact on Kansas.

Again, thank you Mr. Chairman for this opportunity to address some of the many questions regarding these proposed rules. I look forward to the witness testimony and questions.

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PRINTED ON RECYCLED PAPER

State of Kansas

Bill Graves Governor

Department of Health and Environment

James J. O'Connell, Secretary

March 10, 1997

Air and Radiation Docket and Information Center
401 M Street SW
Washington, D.C. 20460

Attn.: Dockets Numbered A-95-38, A-95-54, A-95-58, and A-96-51

We are pleased with the opportunity to provide comment on your recent proposals to revise the National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter and associated implementation and air monitoring issues. The Kansas Department of Health and Environment (KDHE) has a critical interest in these proposals both as an agency that will be responsible for implementing many of the air quality programs affected by the proposals as well as the agency in Kansas responsible for developing and implementing statewide programs designed to protect the public health. It goes without saying that the protection of the health of the citizens of Kansas is of paramount importance to our agency and our state. On that basis, the comments summarized below and the enclosed impact analyses are presented primarily from the perspective of an implementing agency. The summary of the background health-related information used by EPA to develop the proposals has been reviewed, but has not been the subject of comprehensive evaluation by our agency.

The preparation of comments by KDHE on the NAAQS proposals has been very difficult because of the quantity of information involved and the short time frame provided following publication. The scarcity of environmental measurements of $PM_{2.5}$ in the rural areas of the United States made assessment of the potential impact upon Kansas of the changes proposed to the particulate matter standards especially problematic. The broad range of options presented for the revised ozone NAAQS also raised questions related to uncertainties in the health effects information. Our analysis of the ozone proposal was driven primarily by the evaluation of impacts upon implementation rather than the standard itself. As you are aware, the implementation procedures for the revised ozone NAAQS are still based upon a single discrete compliance level. The use of a single regulatory level to implement a variable exposure standard seems inappropriate given the number and range of options presented for the health standard, all of which are purported to be consistent with a policy protective of the public health. These problems, in combination with circumstances somewhat unique to the Kansas City metropolitan area and rural Kansas, contributed to our having identified several significant concerns related to the implementation of the new standards as proposed. These concerns are summarized below and in the enclosed impact analysis:

Division of Environment, Bureau of Air and Radiation Telephone: (913) 296-1593

1. With respect to the revisions proposed for the ozone NAAQS, our primary concerns involve the detrimental effect which we expect to occur upon the ozone-related control strategy in Kansas City. Kansas City was recently (1992) redesignated from a sub-marginal nonattainment area to a "fragile" attainment area. The adoption of a 0.08 ppm(third high) revised standard would return Kansas City to nonattainment status. We expect the imposition of the regulatory sanctions that would occur automatically with a return to nonattainment to disrupt the relationships established among the coalition of air quality interests currently working together in Kansas City. Such a disruption is of particular concern because of the large uncertainties reflected in the range of options presented for a revised standard. The differences in the impact to implementing agencies (and associated health implications) between a 0.07ppm standard and a 0.09ppm standard are pronounced in Kansas. The lower range proposed (.07ppm, 8-hour average, first high) has been exceeded in far western Kansas in a small rural community with a population of 4,800 residents, whereas the high range proposed (0.09ppm, 8-hour average, fifth high) would not be exceeded anywhere in the state including the greater Kansas City metropolitan area. As revisions move the standard lower, the resulting compliance levels move closer to background levels and implementation strategies increasingly involve changes in public lifestyles rather than more narrowly focused options. These facts suggest that such changes should include simultaneous changes to the attainment/nonattainment redesignation process which seems to be rapidly becoming outdated. Information presented during the Ozone Transport Assessment Group (OTAG) process has also suggested that the workday/weekend ozone level relationships are also much different with an eight-hour average standard in comparison to the current one-hour standard. These findings have great relevance to the selection of control strategies, specifically, and to the implementation process in general.

   Despite the wide range of options presented for the revised ozone standard, the regulatory response to the standard continues to be reduced to a discrete (and somewhat arbitrary) regulatory compliance level that places the community of Kansas City in a significantly more severe regulatory posture. As noted above, the attainment status of the area would most certainly return to nonattainment at a time during which a broad community effort was encouraging additional air quality control measures well above the minimum required under the area's maintenance plan. The current impetus for these actions has been the community consensus to make a "clean" city cleaner. Upon return to a nonattainment status, there is great concern that the impetus will change to one that attempts to make a "dirty" city cleaner. This shift from a community process to a regulatory process will reduce the effectiveness of community involvement in the implementation of air quality initiatives defaulting instead to regulatory agency mandates. We have deep concerns that this change will polarize affected interests and delay further progress in Kansas City. Delays in actual air quality improvements will also occur as a result of agencies having to begin a new, extended planning process including modeling and attainment plan development. The time frame for developing a new

more complex attainment plan will be long in comparison to the much shorter time frame involved in continuing progress under the maintenance process.

Recommendations:

Delay the promulgation of a revised ozone standard until the FACA process has identified a strategy to change the attainment designation procedures to recognize the uncertainties associated with identifying a discrete ozone standard level and for other reasons. This strategy should consider the option of providing detailed information to the public on the health effects of ozone at all of the various levels studied, while establishing at least a two-tiered regulatory standard that recognizes a difference in the exposure level at which a community should be concerned and informed and the level at which the community should be found in violation of federal law. The lower tier would result in requirements for continued progress in reducing emissions and educating the public on a variety of ozone-related issues, whereas, the higher tier would require the comprehensive planning process now associated with being a nonattainment area.

2. Concerns related to the new $PM_{2.5}$ standard result primarily from inconsistencies in the information available on the characteristics and origins of the particles targeted by the proposal. On the one hand, a new $PM_{2.5}$ standard has been justified on the basis that fine particles are much different than coarse particles (e.g., combustion-related, soluble, chemically-reactive, etc.) and originate from different sources including secondary particle formation from gaseous precursors. On the other hand, emission information pertaining to sources of primary $PM_{2.5}$ emissions indicates that significant overlap occurs between the fine and coarse fraction from many sources of fugitive dust such as paved roads, unpaved roads, and windblown dust. One such reference (see Table 3 in the attachment) indicates that as much as 75% of paved-road fugitive dust may occur in the fine fraction. Despite these inconsistencies, health-related information has not been compiled to determine whether fugitive dust related $PM_{2.5}$ particles represent health concerns equal to those described for the more chemically-reactive combustion particles. As a result, the fugitive dust component of $PM_{2.5}$ emissions in the rural areas of the United States may represent a significant source of exposure not intended to be the target of concern in many of the urban health studies completed. If, in fact, such particles are believed to be of equivalent concern to the combustion-related particles generally associated with the urban studies, the need to establish a new standard, as opposed to revising the current PM_{10} standard, comes under question in rural areas. Confusion concerning the role of fugitive dust emissions in $PM_{2.5}$ exposure assessments also raises concerns that the level selected may be too low given potential background levels of fugitive dust in rural areas, but too high for specific categories of urban particulates that may be of greater toxicological significance.

Recommendation:

Delay the promulgation of the new $PM_{2.5}$ standard until sufficient air monitoring is completed to fully assess the role of fugitive dust in the $PM_{2.5}$ standard proposal. These additional measurements will also allow the particles targeted by the proposal to be more accurately characterized and assure that the appropriate compliance level for the standard is identified.

We hope our comments are helpful to you as your agency deliberates on these complex proposals. If we can provide additional information, please feel free to contact the undersigned directly.

Sincerely,

John C. Irwin, P.E., Director
Bureau of Air and Radiation

jp/airdocke.jci
Enclosure
c James J. O'Connell
Ronald Hammerschmidt
Region VII EPA

Kansas Department of Health and Environment
March 10, 1997

Preliminary Analysis of the Impact in Kansas of the Proposed Decisions by the U.S. Environmental Protection Agency to Modify the National Ambient Air Quality Standards for Particulate Matter and Ozone

I. Background

In accordance with sections 108 and 109 of the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) has reviewed and proposed revisions to the National Ambient Air Quality Standards (NAAQS) for particulate matter and ozone. These classes of pollutants represent two of the six classes of criteria pollutants for which federal NAAQS have been established. The remaining four classes are nitrogen oxides, sulfur oxides, carbon monoxide and lead. Under Section 109 of the CAA, EPA is required to periodically review, revise, and promulgate new standards as appropriate to protect the public health. The results of this process recently completed for particulate matter and ozone, as published in the *Federal Register* on December 13, 1996, are the subject of this analysis. The purpose of the analysis is to assess the impact of the proposed changes in Kansas in terms of applicability, changes that might result in additional regulatory requirements and, where possible, public health benefits. Any conclusions reached are intended to form the framework for the submittal of constructive, Kansas-specific comments on the proposal prior to the close of the public comment period.

The analysis has been organized into four separate sections related to particulate matter, ozone, implementation issues, and monitoring. The available technical information applicable to the study of these proposals was found to be overwhelming in terms of both volume and complexity. For this reason, the analysis is inherently constrained for the following reasons:

1. The comment period was short. Because of the voluminous background research published on subjects related to the proposals, it was necessary to rely heavily on the EPA staff paper synthesis of these studies. Had additional time been available, further study of the original works may have resulted in a different perspective on the relevance of the proposals to Kansas public health and environmental management programs.

2. The quantity of actual environmental measurement experience directly comparable to the newly-proposed standards was very limited. Some fine particulate matter measurements ($PM_{2.5}$) were completed in Topeka during the Harvard Six Cities Study; however, no other $PM_{2.5}$ measurement data were found to be available in Kansas. For this reason, procedures were developed to test the validity of extrapolating information from the PM_{10} data generated in the Topeka study to other parts of the state as PM_{10} has been measured

throughout Kansas. As additional $PM_{2.5}$ measurements become available, conclusions related to the $PM_{2.5}$ particulate matter proposal will improve. In terms of ozone measurements, ozone monitors have been located throughout the greater Kansas City metropolitan area and in Wichita for many years. This data is useful for assessing impact in these areas. It is not helpful in predicting impacts in areas where ozone monitors have not been located. Since the new ozone proposal is closer to background summer levels, it is likely that the affected area in Kansas City would be enlarged if the monitoring network were to be expanded.

3. Most of the background information presented in support of the proposals has originated from studies completed in the larger urban areas of the United States, particularly the northeast and west. Past experience in air pollution control programs has revealed great variation in the severity and nature of air pollution control problems across the United States. Many elements of the CAA are written specifically to recognize such regional differences. For this reason, the relevance of many of these studies to environmental conditions in Kansas is questionable. Where possible, Kansas-specific information has been presented to contrast with findings from the larger urban areas that were not considered appropriate for generalization to conditions in Kansas.

II. Revisions to the NAAQS for Particulate Matter

The proposed revisions to the particulate matter air quality standards include several changes to the existing PM_{10} standards (including the possible revocation of the 24-hour PM_{10} standard) as well as the addition of new annual and 24-hour $PM_{2.5}$ standards and accompanying measurement methods. While technical comments are likely to be submitted in relation to the PM_{10} decision-making, the addition of the new $PM_{2.5}$ standard is believed to represent the most significant change to Kansas among those included in the particulate matter proposal. For this reason, the impact assessment will focus on the $PM_{2.5}$ issue.

A new $PM_{2.5}$ NAAQS has been proposed as a result of a reported national concern for associations between fine particles (hereinafter defined as $PM_{2.5}$) and serious health effects. Numerous studies have associated increases in ambient levels of $PM_{2.5}$ with increases in mortality and aggravation of existing respiratory and cardiovascular disease among the exposed public, particularly the more sensitive members such as the elderly and the young. While such associations have also been seen with measurable levels of PM_{10}, the association is reported by some to be stronger with $PM_{2.5}$.

The proposal to create a new $PM_{2.5}$ standard rather than modify the current PM_{10} standard also relies heavily on the premise that the sources of $PM_{2.5}$ particles differ significantly from those for PM_{10} and that the health effects and subsequent control strategies will differ accordingly. The primary sources of $PM_{2.5}$ emissions are described as fuel combustion (from vehicles, power generation, and industrial facilities), residential

fireplaces, agricultural burning and atmospheric formation from gaseous precursors such as sulfur dioxide, nitrogen oxides, and volatile organic chemicals (VOC). Coarse fraction PM_{10} emissions are associated more with construction and demolition activities, industrial operations, wind-blown dust, and road dust. The proposal acknowledges that the difference in chemical and physical composition and emission sources between these two fractions of PM_{10} particulate matter has significant implications for the relative health risks posed by each fraction. $PM_{2.5}$ particles are described by EPA as combustion related, soluble, and chemically reactive. Coarse crustal dust particles are generally considered to be non-combustion-related, insoluble, and non-reactive.

In Kansas, direct $PM_{2.5}$ measurements have been found to be available from only one source — the Harvard Six Cities Study. The Harvard study analyzed the survival of 8000 adults over a 14-year period of time in six U.S. cities including Topeka, Kansas. The study also measured total particulates, PM_{10}/PM_{15}, and $PM_{2.5}$ levels in these cities for approximately twelve years beginning in 1975 and ending in 1987. The results of these measurements are summarized in Table 1 and Figure 1.

AVERAGE PARTICULATE MATTER (ug/m³) BY MONTH
FROM HARVARD DATA FOR TOPEKA
SEPTEMBER 1979 - FEBRUARY 1987

			Correlation of data for all years pooled by month	
MONTH	PM2.5	PM10	R*	RATIO**
January	10.1	19.5	0.738	0.518
February	13.0	24.4	0.527	0.533
March	12.2	23.9	0.302	0.510
April	12.1	27.6	0.592	0.438
May	12.1	28.1	0.732	0.431
June	14.1	32.8	0.811	0.430
July	16.5	39.4	0.736	0.419
August	17.1	36.5	0.812	0.468
September	12.2	34.3	0.731	0.356
October	8.8	25.0	0.579	0.352
November	8.9	20.5	0.728	0.434
December	9.2	17.0	0.605	0.541

* Pearson Correlation Coefficient
** $PM_{2.5}/PM_{10}$

TABLE 1.

The data are presented as averages (by month of sample collection) of the PM_{10} and $PM_{2.5}$ levels measured at a monitoring site located at a university setting in a central residential area of Topeka.

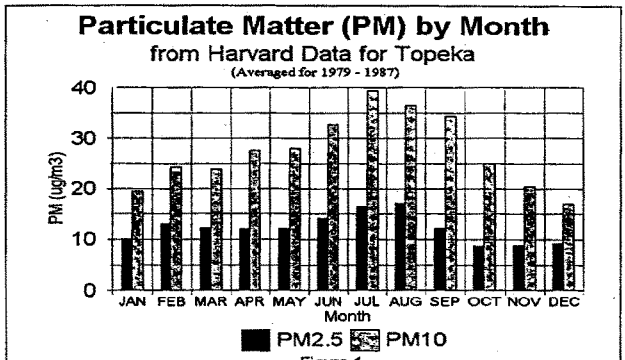

Figure 1.

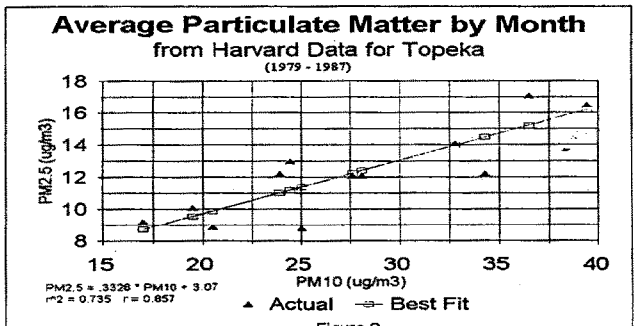

Figure 2.

ESTIMATION OF PM-2.5 FROM PM-10 DATA FOR ANNUAL STANDARD

Proposed Standard = 15 ug/m3
Conversions using ratio factors: (PM-10 x Factor) = PM-2.5

1993-1995 THREE YEAR AVERAGES						
LOCATION		MEASURED PM-10	CALCULATED PM-2.5			
City	Site Address	PM-10	HARVARD 0.501	Spatial Average	TOPEKA 0.525	Spatial Average
Concordia	135 East Sixth	29.9	15.0		15.7	
Dodge City	2100 First	24.9	12.5		13.1	
Overland Pk.	85TH & Antioch	27.8	13.9		14.6	
Chanute	1500 West Seventh	25.5	12.8		13.4	
Wichita	St. Paul & West 13th	25.6	12.8		13.4	
	G. Washington Blvd. & Skinner	25.1	12.6		13.2	
	Glenn & Pawnee	28.5	14.3		15.0	
	3600 North Hydraulic	34.9	17.5	14.3	18.3	15.0
Topeka	1500 North Quincy	29.1	14.6		15.3	
Harvard (Actual 3yr. Avgs, 1984-86)		22.3	11.1			
Goodland	1010 Center	27.6	13.8		14.5	
Kansas City	420 Kansas	40.8	20.4		21.4	
	444 Kindelberger	37.8	18.9	19.7	19.8	20.6
Elkhart	Cimarron National Grassland	20.3	10.2		10.7	

HARVARD:
Six Cities Study Factor: Overall average PM-2.5 divided by PM-10 from Harvard Six Cities Study Dichot measured data collected on the Washburn University campus in Topeka.
This value was reported in the Journal of the Air and Waste Management Association, 46:931, October 1996.

TOPEKA:
KDHE factor: Median of annual average PM-2.5 divided by annual average PM-10 for 1984-1986 using Harvard Six Cities Study Dichot measured data collected on the Washburn University campus in Topeka.

TABLE 2.

Table 2 summarizes the PM_{10} levels measured at the various PM_{10} monitoring sites located across Kansas (expressed as a three-year average) as well as the $PM_{2.5}$ levels calculated to be associated with those measurements from a procedure derived from the Topeka $PM_{2.5}/PM_{10}$ ratio.

It is worth noting from Figure 2 that the relationship between $PM_{2.5}$ and PM_{10} levels measured in Topeka during the Harvard Six Cities Study were found to be closely correlated [Pearson correlation coefficient ($r = 0.86$)]. This finding is in agreement with other studies where similar relationships have been found in cities, but where correlations have been weaker at rural sites. [1]

On the basis of this finding, the extrapolation in Table 2 to the Kansas PM_{10} network is believed to represent a reasonable estimate of expected $PM_{2.5}$ levels in the absence of other information. In the Canadian study noted above, during which both urban and rural samples were collected the absolute values of the $PM_{2.5}$ concentrations were lower at the rural sites in comparison to the urban measurements.[1]

Table 3 presents national estimates of the sources of direct PM_{10} and $PM_{2.5}$ emissions by source category. This table is intended to provide insight into the types of control strategies that might be employed to reduce emissions of primary $PM_{2.5}$ particles. It should be noted that approximately 75% of the PM_{10} emissions from paved roads are reported as being in the fine fraction ($PM_{2.5}$) and that fugitive dust itself accounts for approximately 83% of the primary $PM_{2.5}$ emissions inventory. The table does not provide information on the comparative effects of reducing emissions of gas or vapor precursors to the formation of secondary $PM_{2.5}$ particles. Sources of secondary $PM_{2.5}$ particles are believed to vary significantly from city to city and by region. Table 4 and Figures 3 and 4 present the Topeka PM_{10} data in terms of sulfate concentrations and trends. Table 5 presents a summary of the sulfate concentrations measured in the PM_{10} network across Kansas.

PARTICULATE EMISSIONS

Based on 1990 national emission totals (tons)

Reference: Controlling Particulate Matter Under the Clean Air Act: A Menu of Options; STAPPA/ALAPCO; July 1996; pp. 48-49.
Cited source is EPA, September 1994

SOURCE	PM-10	PM-2.5	RATIO PM-2.5:PM-10	% OF TOTAL PM-10	% OF TOTAL PM-2.5
Electric Utilities	291,141	157,431	0.541	0.605	0.869
Industrial	777,877	513,319	0.660	1.616	2.834
Storage & Transport	54,494	20,029	0.368	0.113	0.111
Waste Disposal & Recycling	241,825	209,611	0.867	0.502	1.157
Heating					
Residential-Wood	880,673	880,673	1.000	1.829	4.683
Other	48,916	29,377	0.601	0.102	0.162
Heating Total	929,589	910,050	0.979	1.931	5.025
Combustion - Vehicles	609,665	538,306	0.883	1.266	2.972
Prescribed & Natural Fires	746,762	650,267	0.871	1.551	3.591
Fugitive Dust					
Wind Erosion - Nonagricultural Land	157	46	0.293	0.000	0.000
Wind Erosion - Agricultural Land	4,192,159	1,676,864	0.400	8.707	9.259
Agricultural Crops	6,999,475	3,331,750	0.476	14.537	18.397
Agricultural Livestock	380,991	181,424	0.476	0.791	1.002
Paved Roads	7,491,559	5,618,670	0.750	15.559	31.024
Unpaved Roads	15,521,895	4,096,055	0.264	32.237	22.617
Construction Activities	9,891,994	200,215	0.020	20.545	1.106
Miscellaneous	19,232	6,659	0.346	0.040	0.037
Fugitive Dust total	44,497,462	15,111,683	0.340	92.417	83.441
Total	**48,148,815**	**18,110,696**	**0.376**		

TABLE 3.

AVERAGE PARTICULATE MATTER (ug/m³)
FROM
TOPEKA: 1992-1994

MONTH	PM10	SO4	SO4 AS % OF PM10
January	24.1	2.1	8.7
February	20.6	2.5	12.1
March	25.8	2.9	11.2
April	29.7	3.8	12.8
May	30.8	3.6	11.7
June	31.1	3.6	11.6
July	24.0	2.0	8.3
August	34.0	4.6	13.5
September	33.0	3.4	10.3
October	31.5	3.0	9.5
November	20.8	2.2	10.6
December	25.1	2.9	11.6

TABLE 4.

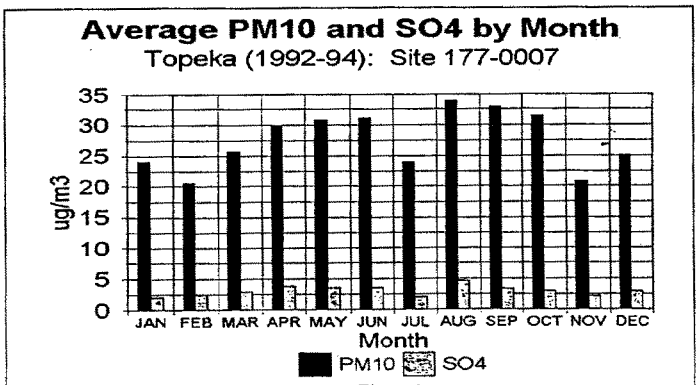

Figure 3.

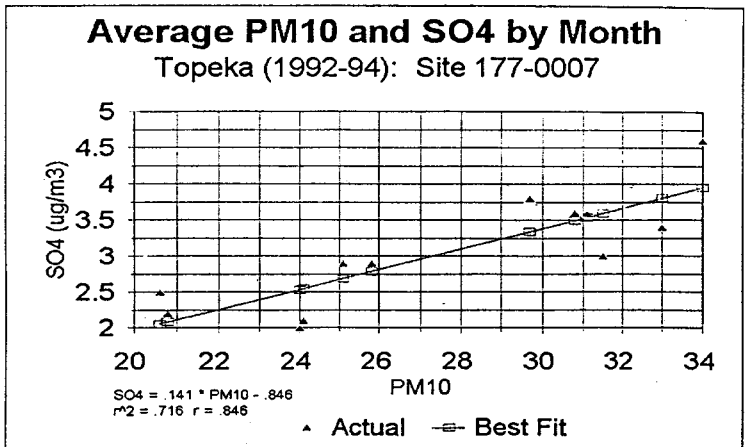

Figure 4.

Ambient SO4 Concentration in Particulate Matter ≤ 10u (PM_{10})

Data averaged over 1991 through 1995

City	County Population	ug/m^3	% of PM_{10}
Kansas City	172,335	3.6	8.8
Wichita	367,088	3.2	10.7
Topeka	154,916	2.9	10.1
Dodge City	24,315	2.1	8.7
Concordia	12,494	2.6	8.2
Goodland	7,759	1.5	5.1

TABLE 5.

More detailed analysis of the Harvard Six Cities particulate measurements appear to provide the most credible information available, to date, on the possible significance of a new annual $PM_{2.5}$ NAAQS of 15μg/m³ in Kansas. The primary relevant findings drawn from analysis of this data are summarized below:

1. Changes in $PM_{2.5}$ and PM_{10} levels were closely correlated (Pearson r=0.86) in Topeka. (See Figure 2)

2. $PM_{2.5}$ and PM_{10} levels in Topeka appear to vary seasonally, with average levels of 9.2 μg/m³ and 17.0 μg/m³, respectively, occurring in the winter (December) and 17.1 μg/m³ and 36.5 μg/m³, respectively, occurring in the summer (August). (See Table 1 and Figure 1)

3. $PM_{2.5}/PM_{10}$ ratios vary from a low of approximately 35% to a high of approximately 54%. These variations appear to exhibit some seasonal influence, but could not be correlated with PM_{10} or $PM_{2.5}$ measurements by regression analysis. (See Table 1)

4. Annualized $PM_{2.5}$ levels predicted from the Topeka study would violate a 15 μg/m³, 3 year spatially-averaged standard in Wyandotte County. Annualized $PM_{2.5}$ levels predicted for Concordia, Kansas a small rural community, would be right at the maximum allowable. All predicted $PM_{2.5}$ levels across Kansas would be within 15% of the standard (≥12.75 μg/m³) with the exception of the remote site located in the Cimarron National Grassland near Elkhart and the value calculated from the last three years of Harvard data. It should be noted that a 12.5 μg/m³ standard was the low end evaluated in the proposal and all sites except Elkhart would violate an annual standard at this level when compared to calculated levels extrapolated using the 1984-1986 Harvard conversion factor. (See Table 2)

5. Monthly averages of sulfate levels measured through the PM_{10} network in Topeka indicated absolute concentrations varying from 2-4 μg/m³. Monthly averages of percentages of sulfate as a component of PM_{10} varied from approximately 8% to approximately 13%. If all sulfate collected was assumed to occur in the fine fraction ($PM_{2.5}$), the percentage of sulfate in the Harvard $PM_{2.5}$ measurements would vary from approximately 20% to approximately 26%. Sulfate percentages did not appear to vary seasonally in a consistent manner. (See Table 4 and Figure 3)

6. Five-year average sulfate levels measured in Topeka were approximately 3 μg/m³. Sulfate levels measured in Goodland, Kansas of (a rural community in far western Kansas) averaged 1.5 μg/m³ were below, while sulfate

levels in Wyandotte County, Kansas (an eastern Kansas urban center) averaged 3.6 $\mu g/m^3$ (See Table 5).

7. Sulfate levels measured in the Kansas PM_{10} network showed strong correlation ($r = 0.85$) with corresponding PM_{10} measurements. (See Figure 4)

Conclusions:

The results of the analysis of the characteristics of particulate exposures in Kansas as reflected in the state's PM_{10} air monitoring data, along with the limited $PM_{2.5}$ monitoring data collected in Topeka during the Harvard Six Cities Study, raise significant questions over the applicability in Kansas of the basic premises upon which the $PM_{2.5}$ proposal is based. The premise most subject to question involves the assumption that $PM_{2.5}$ particles measured in smaller urban or rural areas result typically from fuel combustion, fireplaces, agricultural burning, and atmospheric formation.

While the assumption above may be valid in larger urban areas in the northeastern and far western United States or in areas where particulate releases are dominated by stationary sources of combustion particulate, the preliminary conclusions reached in Kansas related to the origins of airborne particulate matter (both PM_{10} and $PM_{2.5}$) in the agricultural areas of the central United States indicates that such exposures also result from a significant entrained crustal dust component. Such primary particle sources as paved and unpaved roads, windblown dust, or other sources of fugitive dust are believed to contribute significantly to such exposures (See Table 3). The primary conclusions are summarized below:

1. The relatively strong correlations between $PM_{2.5}$ and PM_{10} levels found in Topeka indicate a likelihood that the changes in these measurements are related to changes in similar sources. The seasonal nature of the $PM_{2.5}$ and PM_{10} levels in Topeka (both increasing from winter to summer) suggests a strong crustal dust influence. One researcher attributed this seasonal change in PM_{10} measurements in Topeka to snow cover[2]. This conclusion suggests that although the $PM_{2.5}$ measurements completed in Topeka varied from approximately 8 $\mu g/m^3$ in winter to 17 $\mu g/m^3$ in summer, the mean value for the six cities study of 12.5 $\mu g/m^3$ is at the low range proposed for the new standard and the likely result of a component that includes near background fugitive crustal dust levels. Results of the Topeka study appear to conflict with the premise that a general measurement procedure for $PM_{2.5}$ provides an adequate nationwide surrogate for combustion-related $PM_{2.5}$ particles or for predicting health effects believed to be associated with such particles in combination with complex mixtures of polluted urban air. The significance of this conclusion is critical to the rural areas of the United States where $PM_{2.5}$ measurements may, in fact, reflect the presence of particles in the air whose differences in chemical characteristics may render them less harmful than those mixtures found in urban air even though the ambient level of such particles may be comparable. The policy implications of a full understanding of the role of fugitive crustal dust in $PM_{2.5}$

exposures in the less urbanized areas of the United States include both a concern for the proposed standard being too low and near background levels of fugitive dust in non-urban areas, as well as a concern that the proposed standard may be too high for adequate public health protection from the more toxicologically active components that may be present in the air of highly urbanized areas. It seems apparent that inadequate study has been made of the sources and health implications of exposure to $PM_{2.5}$ particles in rural areas.

2. The Kansas air monitoring data related to sulfates also provides limited support to the suggestion that crustal dust is a significant component of both the coarse and fine fractions of the PM_{10} measurements reported across Kansas. Not only were PM_{10} and $PM_{2.5}$ levels found to vary seasonally, but sulfate levels were also found to correlate strongly with PM_{10} levels. Sulfate percentages of PM_{10} did not exhibit seasonal increases during the winter as would be expected given a reduction in crustal dust if the primary origin of the sulfate was combustion-related. Certainly, decreases in crustal dust levels during the winter would be expected to be accompanied by increases in the percentage of the sulfate component of particulate measurements in the winter if the fine fraction was originating primarily from combustion-related sources. No such finding was evident with respect to PM_{10} measurements. This finding is consistent with intuitive observations as the community of Topeka is not expected to be exposed to a significant industrial or power plant exposure to sulfate precursors during the winter or the summer and the average SO_2 level reported for Topeka was the lowest by a large margin among the six cities studied by Harvard. It is important to note however, that much additional monitoring information is needed before firm conclusions can be reached to explain with confidence the changes in $PM_{2.5}$ and PM_{10} levels from summer to winter.

III. Revisions to the NAAQS for Ozone

The proposed revision to the ozone air quality standard includes both changes to the form of the standard and the level itself. The current standard of 0.12 parts per million (ppm) based upon a one-hour average is proposed for change to a 0.08 ppm standard averaged over an eight-hour period. The proposal also changes the compliance test from a maximum number of annual exceedances of 1.0 averaged over three years to a form that limits the third highest eight-hour concentration averaged over a three-year period. The proposal also solicits comments on a number of alternative standards based upon a range of exposure levels provided to EPA by their advisory group within which their review of the background scientific information found support. For the purposes of this analysis, the proposal to move from a one-hour standard of 0.12 ppm to an eight-hour average standard of 0.08 ppm (annual third high) averaged over a three-year time period is considered to be the proposed change that has the greatest potential to directly impact the ozone control program in Kansas. For that reason, this analysis will focus on that issue.

Historically, ozone has been a concern in Kansas primarily in the metropolitan area of Kansas City. A five-county area in Kansas City (including Johnson and Wyandotte

counties in Kansas) was declared an ozone nonattainment area in the late-1970s and remained as such until 1992 when the area was federally-approved for re-designation to attainment. In order to gain attainment status, the states of Kansas and Missouri were required to demonstrate to EPA that compliance with the standard could be maintained into the future and a long-term maintenance plan was approved. Hot weather conditions experienced during the summer of 1995 resulted in a total of 9 exceedances of the standard spread across four of the six ozone monitoring sites maintained throughout the five-county area. These exceedances resulted in a regulatory violation at one of the monitoring locations. The resulting violation triggered implementation of contingency provisions in the maintenance plan designed to respond to future findings of air quality problems. This response was organized through a regional air quality forum consisting of a broad coalition of interested parties including state, local, and federal government representatives, local businesses, environmental groups, and members of the public. A series of recommendations for enhancements to the emission control, transportation management, and air-related public education programs in Kansas City emerged from this group. These recommendations include actions above those required as the minimum in the maintenance plan approved for the area. The forum reached a clear consensus that continued progress to prevent further air quality problems in Kansas City was in the best interest of the city now and in the future. State and local governments (including the regional planning organization) are currently preparing plans and adopting regulations to implement the recommendations of the Kansas City air quality forum.

Tables 6, 7, and 8 summarize the results of applying the newly-proposed ozone standard criteria to measurements from the Kansas ozone monitoring network. Table 6 summarizes the results in regulatory terms.

3 - YEAR ANALYSIS OF OZONE: APPLICATION OF NEW NAAQS

1993 - 1995

LIBERTY, MO: 29-047-0005				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0955	0.1035	0.1253	*0.1081*
2	0.0873	0.0980	0.1050	*0.0968*
3	0.0866	0.0963	0.1046	***0.0958***
4	0.0828	0.0903	0.0991	*0.0907*
5	0.0803	0.0894	0.0975	*0.0891*

WATKINS MILL (MO): 29-047-0003				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0876	0.0923	0.1195	*0.0998*
2	0.0796	0.0915	0.1119	*0.0943*
3	0.0785	0.0908	0.0986	***0.0893***
4	0.0771	0.0893	0.0961	*0.0875*
5	0.0756	0.0846	0.0943	*0.0848*

KCI (MO): 29-165-0023				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0850	0.0875	0.1000	*0.0908*
2	0.0831	0.0845	0.0997	*0.0891*
3	0.0816	0.0843	0.0989	***0.0883***
4	0.0814	0.0830	0.0906	*0.0850*
5	0.0703	0.0813	0.0906	*0.0807*

Table 6. (Continues on following pages.)

3 - YEAR ANALYSIS OF OZONE: APPLICATION OF NEW NAAQS

1993 - 1995

WORLDS OF FUN (MO) 29-047-0025				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0795	0.0789	0.1060	*0.0881*
2	0.0735	0.0782	0.0948	*0.0822*
3	0.0731	0.0759	0.0916	***0.0802***
4	0.0718	0.0756	0.0896	*0.0790*
5	0.0705	0.0705	0.0884	*0.0765*

KANSAS CITY, KS (HD): 20-209-0001				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.1040	0.0761	0.1060	*0.0954*
2	0.0740	0.0720	0.0991	*0.0817*
3	0.0696	0.0715	0.0920	***0.0777***
4	0.0639	0.0714	0.0894	*0.0749*
5	0.0626	0.0712	0.0884	*0.0741*

RICHARDS-GEBAUR AFB (MO): 29-095-0036				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0786	0.0809	0.0817	*0.0804*
2	0.0745	0.0728	0.0790	*0.0754*
3	0.0743	0.0710	0.0786	***0.0746***
4	0.0730	0.0700	0.0783	*0.0738*
5	0.0723	0.0687	0.0780	*0.0730*

Table 6. (Cont'd.)

3 - YEAR ANALYSIS OF OZONE: APPLICATION OF NEW NAAQS

1993 - 1995

WICHITA, KS: 20-173-0001				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0650	0.0762	0.0887	*0.0766*
2	0.0625	0.0750	0.0838	*0.0738*
3	0.0625	0.0737	0.0800	***0.0721***
4	0.0613	0.0737	0.0775	*0.0708*
5	0.0612	0.0737	0.0762	*0.0704*

WICHITA, KS: 20-173-0010				
# High	**1993**	**1994**	**1995**	**3 Yr. Avg.**
1	0.0675	0.0706	0.0725	*0.0702*
2	0.0631	0.0694	0.0725	*0.0683*
3	0.0613	0.0681	0.0719	***0.0671***
4	0.0594	0.0675	0.0694	*0.0654*
5	0.0587	0.0669	0.0694	*0.0650*

*GOODLAND, KS: 20-181-0002			
# High	**1994**	**1995**	**2 Yr. Avg.**
1	0.0675	0.0750	*0.0713*
2	0.0662	0.0700	*0.0681*
3	0.0662	0.0675	***0.0669***
4	0.0650	0.0675	*0.0663*
5	0.0650	0.0662	*0.0656*

Table 6. (Cont'd.)

3 - YEAR ANALYSIS OF OZONE: APPLICATION OF NEW NAAQS

1991- 1993**

DODGE CITY, KS: 20-057-0001				
# High	**1991**	**1992**	**1993**	**3 Yr. Avg.**
1	0.0675	0.0712	0.0675	*0.0687*
2	0.0675	0.0662	0.0675	*0.0671*
3	0.0587	0.0662	0.0650	*0.0633*
4	0.0587	0.0650	0.0625	*0.0621*
5	0.0575	0.0650	0.0613	*0.0613*

* Goodland: Based on 2 years of data (1994-1995).
** Dodge City: Based on 1991 -1993.

Table 6.

The first through fifth highs of the eight-hour, three-year average ozone levels from 1993-1995 are reported for each of the ten monitoring sites tracked in Kansas. These ten sites include five locations in Missouri that are part of the monitoring network for the five-county greater Kansas City metropolitan area. Table 6 illustrates the very broad range of options presented in the proposal as a result of EPA's scientific advisory process failure to arrive at a consensus for a more definitive recommendation for a new ozone standard. The range of possible values proposed for the revision included a 0.07 ppm (first high) level which is exceeded at every monitoring site in Kansas City as well as most other sites in Kansas. Interestingly, the small rural community of Goodland, Kansas, in far northwestern Kansas, near the Colorado border, is predicted to violate the 0.07 (first high) standard level if the alternate, more stringent rounding procedure is used. In contrast, the value proposed for the other end of the range of 0.09 ppm (fifth high) would not be expected to be violated at any of the ten monitoring sites tracked in Kansas including those in Kansas City. The "middle" value actually proposed by EPA of 0.08 ppm (third high) is expected to be violated at three of the monitoring sites in Kansas City (all in Missouri) and at no other sites in Kansas using conventional rounding techniques. These rounding procedures result in an exceedance of the 0.08 ppm (third high) standard when the

three-year average of the third highest annual eight-hour average readings is 0.085 ppm or above. These results differ significantly from the current ozone regulatory status in Kansas. Under the existing standard, Kansas City experienced a violation of the 0.12 ppm standard at a single monitoring site in 1995. This was the first violation in Kansas City since 1990.

Tables 7 and 8 present the impact of the proposed 0.08 ppm (third high) standard in comparison to the current standard in terms of changes in the number of ozone problem days. Table 7 presents the comparison for 1995 monitoring data for all standard levels being considered while Table 8 presents the comparison for the last ten years of monitoring data considering only the 0.08 ppm (third high) proposed level. The number of problem (unhealthy) days that occur with a given standard level are believed to provide a more direct indication of the severity of the air quality problem in a given area. These measurements are also believed to provide an improved sense (in comparison to regulatory status criteria) of the amount of improvement in terms of both the emission reductions that would likely be needed to actually improve air quality and the work required to change the public's perception of the cleanliness of their air. The regulatory status reports are the products of complex averaging procedures and inherently confusing. When considered in these terms, the impact of the proposed revisions to the ozone standard upon the perception of the cleanliness of the air in Kansas City is pronounced. It should be noted, however, that revisions to a standard proposed don't actually change the quality of the air.

Table 7 indicates that the number of problem days in Kansas City in 1995 would have increased from 3 under the current standard to 17 under the proposed 0.08 ppm (.084 rounding) proposal and 31 under the 0.07 (.074 rounding) proposal. In addition, the 0.09 (.094 rounding) would have increased the severity level of the problem by a factor of two (7 days versus 3 days) over the current standard. This latter finding is in contrast to the general assessment presented in the proposal that the 0.09 proposal was the rough equivalent to the current standard. The problem day-related criteria would seem to indicate that even the 0.09 proposal increases the severity of the perceived air quality problem in Kansas City significantly.

Table 8 also summarizes the impact of the proposed revision in terms of problem days but extends the analysis over a ten-year period of time. These results, again, accentuate the dramatic difference in Kansas City between the 8-9 problem site measurements across all monitoring stations during the problem years of 1988 and 1995 and the 62-66 problem site measurements across the network that would have occurred under the new revised standard. This latter finding suggests that significant new emission control measures will be required to eliminate ozone problem days in Kansas City — an area historically viewed as a fragile attainment area that experiences occasional excursions only during summers of severe weather. It is also worth noting that Kansas City is also a city that would fully comply with the regulatory requirements for a no-problem city if the 0.09 (fifth high) option was selected.

Table 9 summarizes the 1995 volatile organic compound (VOC) inventory for the Kansas segment of the greater Kansas City area. This table was included to provide insight into the areas most likely to experience additional emission reduction regulatory requirements under the revised standard. Indications are that the mobile source component (including fuels) would bear the brunt of the new strategies.

The increase in the severity of the regulatory status in Kansas City is particularly troublesome because it will disrupt the progress being achieved by the community-wide process already underway. It is likely that a setback to non-attainment status and the subsequent imposition of a LAER/Offset regulatory approach will polarize affected parties and slow future progress. The automatic LAER/Offset provisions for nonattainment areas are especially controversial in areas such as Kansas City where offsets are very difficult to obtain and the environmental benefits to the area are minimal.

OZONE PROBLEM DAYS - 1995

Evaluation of Ozone Against Proposed Standard Levels
Based on 1995 data with the exception of Dodge City (1993)

1995							
NUMBER OF 8 HOUR AVERAGES GREATER THAN:							NUMBER OF DAYS GREATER THAN CURRENT STANDARD:
LOCATION	0.070	0.074	0.080	0.084	0.090	0.094	0.124
Kansas City, KS	33	25	13	12	3	2	0
Watkins Mill	36	30	25	17	7	4	3
Liberty	37	31	25	17	10	7	3
Worlds of Fun	24	18	12	11	3	2	2
Richards-Gebaur AFB	22	10	1	0	0	0	0
KCI	29	21	13	9	-5	3	1
Wichita - North	11	8	2	1	0	0	0
Wichita - Health Dept.	3	0	0	0	0	0	0
Goodland	1	1	0	0	0	0	0
Dodge City (1993)	0	0	0	0	0	0	0

Table 7.

A TEN YEAR SUMMARY OF OZONE PROBLEM DAYS

Number of 8 Hour Daily Maxima> 0.084 vs. Number of 1 Hour Daily Maxima> 0.124

SITE	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
KCK	2-2	1-1	3-0	1-1	0-0	0-0	1-0	1-1	0-0	12-0
WAT	1-0	7-0	19-3	0-0	2-0	8-0	1-0	1-0	5-0	17-3
LIB	2-1	5-0	16-3	0-0	0-0	5-0	1-0	3-1	10-0	17-3
WOF	2-2	1-1	13-2	1-0	1-1	0-0	0-0	0-0	0-0	11-2
RGB	No Data	No Data	0-0	4-0	1-0	4-1	1-0	0-0	0-0	0-0
KCI	1-0	1-0	11-0	0-0	1-1	3-0	1-1	1-0	2-0	9-1
WIC-N	0-0	0-0	0-0	0-0	1-0	1-0	0-0	0-0	0-0	1-0
WIC-HD	1-1	0-0	4-0	0-0	3-0	0-0	0-0	0-0	0-0	0-0
TOTALS	9-6	15-2	66-8	6-1	9-2	21-1	5-1	6-2	17-0	67-9

Table 8.

Estimates of 1995 emission totals for Johnson and Wyandotte counties
VOC EMISSIONS

SOURCE	TONS PER SUMMER DAY	PERCENT OF TOTAL
Electric Utilities	0.19	0.2
Industrial		
Evaporation of Industrial Solvents	12.31	
Mineral Products Manufacturing	0.55	
Fuel Combustion	0.31	
Bakeries	0.29	
Chemical and Allied Products	0.27	
Paper/Publishing	0.15	
Other	1.12	
Industrial Total	15.00	12.9
Area Sources		
Solvent Evaporation		
Degreasing	3.79	
Dry Cleaning	1.90	
Architectural	4.49	
Automobile Refinishing	4.35	
Solvent Use	4.73	
Asphalt Paving	1.01	
Pesticide Use	1.09	
Other	3.95	
Waste Disposal & Recycling		
Landfills	5.53	
Open Burning	0.72	
Incineration	0.09	
Area Source Total	31.65	27.3
Motor Vehicles		
Tailpipe and Evaporative		
On-Road	35.15	
Off-Road	15.41	
Fuel Related		
Vehicle Fueling	2.89	
Tank Truck Unloading	1.17	
Underground Storage Tanks	0.40	
Motor Vehicles Total	55.02	47.4
Naturally Occurring Emissions	14.21	12.2
Total	116.07	100.0

Reference: Kansas City Ozone Maintenance State Implementation Plan Revision: Emissions Inventories and Motor Vehicle Emissions Budgets for the Kansas City Metropolitan Area: Kansas Department of Health and Environment, Bureau of Air and Radiation; May, 1995

Table 9.

IV. Implementation Issues

Information discussed in Sections II and III of this document related to the impacts in Kansas of the proposed revisions to the particulate matter and ozone NAAQS has raised several significant concerns in regard to the implementation of the new or revised standards in addition to the technical questions already raised. Major implementation issues are summarized below:

1. Analysis of the limited $PM_{2.5}$ data and more extensive PM_{10} and sulfate data available in Kansas suggest that the influence of fugitive particulate emission sources upon the $PM_{2.5}$ fraction in the central United States has been under-estimated in the proposal. To continue in the direction embraced by the implementation policy for the new $PM_{2.5}$ standard absent additional speciated $PM_{2.5}$ monitoring data, creates a risk of mis-directing the limited resources of state or local air programs toward the control of fugitive dust rather than the particulate pollutants or the combinations of pollutants seemingly targeted in the proposal that may be more harmful as a result of their unique chemical characteristics. This problem suggests the need to delay the adoption of the new standard until the origin and composition of $PM_{2.5}$ particles have been characterized more accurately nationwide (including rural areas) or until a measurement system is approved that more effectively distinguishes between the various $PM_{2.5}$ components of most concern.

2. The proposed revision to the ozone standard to an 8-hour form at 0.08 ppm also raises concerns related to implementation. While the science advisory group was unable to narrow their recommendation to a "bright line" standard level, the implementation process continues to establish a "bright line" level by default for regulatory purposes through the nonattainment designation process. The extremely broad range of options presented for the new ozone standard as being more or less protective of the public health makes the selection of a single regulatory "bright line" very controversial and subject to challenge. While the proposal discusses implementation options that do not require a regulatory "bright line" for uncertain health studies (e.g. through FACA), the conclusion is that current statutory requirements require designations to attainment, nonattainment or unclassifiable after promulgation of a new or revised NAAQS. If so, the revision to the standard should be delayed until the range of options has been narrowed or until an alternative implementation procedure proposed. Such action would prevent the disruption of the air pollution control initiatives still being implemented under the current standard. One such optional implementation procedure would consist of modifying the statute to allow the establishment of more than a single ozone action level for NAAQS implementation purposes. This procedure could allow the uncertainty in health data to be transformed into a two-tier system of standards that would trigger action for reasonable progress below the level that would actually result in a "bright line" nonattainment designation.

3. The deadlines for promulgating the new or revised ozone and particulate standards have been too short following publication for an objective assessment and educational process to be completed that promotes additional understanding and acceptance of the proposed changes. The court-ordered deadline process for establishing new air quality standards has the potential to cloud the implementation process with doubt well beyond promulgation. This situation is particularly problematic for the ozone standard that has been proposed on an accelerated schedule voluntarily by agency action. There are many indications that, if time permitted, changes being discussed in the attainment/nonattainment process could transform the way ozone regulatory programs are managed nationwide and result in additional support for a revised ozone proposal.

V. Other Technical Issues Related to Air Monitoring

1. The completeness requirements proposed for the revised ozone standard could pose problems when evaluating the percent of samples collected. An implementing agency could meet the annual requirements and then not meet the three year requirements if there were to be an equipment or other operating problem during a single year. For example, if one year has a completeness level of 75%, the remaining two years must meet a 95% completeness level in order to comply with the three year requirement. A 95% level may not be practical for agencies using older equipment. We recommend using only the annual completeness test at a tightened level of 80% or 85% without the three year consideration or, alternatively, using only the three year test at 80% or 85% completeness.

2. It seems impossible for implementing agencies to meet the $PM_{2.5}$ three year sample collection schedule proposed. This schedule is presented as providing opportunity for the collection of three years of data so as to allow for calculation of a three-year average prior to the mandatory area designation deadline. In fact, under normal EPA funding practices, state and local agency budget timetables, and equipment purchasing procedures, it will be necessary for the first of the three-year schedule to be used by state and local agencies to obtain funding and equipment. EPA must also approve reference/equivalency of equipment before agencies can purchase such. The implementation time lines need to recognize the inherent delays associated with such an effort and assume that three-year average monitoring results will not be available three years following promulgation, if a final standard is adopted in mid-1997.

3. The requirement for every day sampling of $PM_{2.5}$ will necessitate the need for several manual monitors at each site considering midnight to midnight samples and weekend sampling. These additional costs seem excessive in view of the value of the additional information obtained. If such a procedure is retained, however, the additional funds required must be included in estimates of implementation costs. It is incorrect to assume that the reduction of PM_{10} monitoring will free up enough monies to purchase new $PM_{2.5}$

equipment. Very little cost-savings will accrue from disinvestments in the PM_{10} network.

4. The audit frequency requirement for $PM_{2.5}$ is too stringent. If properly maintained, one or two audits per year should be adequate to assure quality data. The every other month frequency will also result in excessive wear and tear on the audit units when hauling them to the roofs of buildings. As now proposed, it will require one audit unit for at least every two or three monitoring sites. We recommend that EPA consider annual audits only or provide additional funds to support these requirements for extra equipment.

5. Under the $PM_{2.5}$ proposal, implementing agencies that experience exceedances of the $PM_{2.5}$ standard will need to evaluate the filters to determine the specific components collected in order to determine the proper control strategy. This procedure will require the agencies to collect two filters for each sample period as a result of the broad series of chemical analyses that will have to be conducted. Under this scenario, collecting everyday samples will require four units at each site. This will require additional manual sampler units unless continuous monitors with reliable optional automatic cartridge collection units are declared reference/equivalent. These equipment and funding needs must be recognized in the implementation strategy for the new $PM_{2.5}$ standard.

List of References

1. Brook, J.R., Dann, T.F., Burnett, R.T., "The Relationship Among TSP, PM_{10}, and $PM_{2.5}$, and Inorganic Constituents of Atmospheric Particulate Matter at Multiple Canadian Locations", Journal of the Air and Waste Management Association, v47, n1, p2-19, Air and Waste Management Association, Washington, DC

2. Wilson, R. Et al., Health Effects of Burning Fossil Fuels, Assessment and Mitigation, Ballinger Publishing Company, Cambridge, MA

3. Dockery, D.W., et al., "An Association Between Air Pollution and Mortality in /six U.S. Cities", The New England Journal of Medicine, v392, n24, p1753-1759, Dec. 9, 1993, Massachusetts Medical Society

4. "Interim Implementation Policy on New or Revised Ozone and Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS), Notice of Proposed Policy", USEPA, Federal Register, v61, n241, p65751-65762, Dec. 13, 1996, Government Printing Office, Wash. DC

5. "National Ambient Air Quality Standards (NAAQS) for Ozone, Proposed Rule", USEPA, Federal Register, v61, n241, p65715-65750, Dec. 13, 1996, Gove.nment Printing Office, Wash. DC

6. "National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM), Proposed Rule", USEPA, Federal Register, v61, n241, p65637-65713, Dec. 13, 1996, Government Printing Office, Wash. DC

7. Review of the National Ambient Air Quality Standards (NAAQS) for Ozone: Policy Assessment of Scientific and Technical Information, OAQPS Staff Paper, USEPA, Office of Air Quality Planning and Standards, EPA-452\R-96-007, June 1996, Research Triangle Park, NC

8. Review of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM): Policy Assessment of Scientific and Technical Information, OAQPS Staff Paper, USEPA, Office of Air Quality Planning and Standards, EPA-452\R-96-013, July 1996, Research Triangle Park, NC

9. Shprentz, D.S., Bryner, G.C., and Hawkins, D.G., Breathtaking, Premature Mortality Due to Particulate Air Pollution in 239 American Cities, Natural Resources Defense Council. May 1996, NRDC Publications, New York, NY

SENATE CONCURRENT RESOLUTION No. 1608

A CONCURRENT RESOLUTION urging the United States Environmental Protection Agency to maintain current air quality standards unless benefit and economic impact demonstrated.

WHEREAS, The United States Environmental Protection Agency (EPA) has a responsibility to review periodically National Ambient Air Quality Standards (NAAQS) and EPA has proposed a more stringent standard for ground level ozone and added a separate standard for particulate matter (PM2.5) to the existing ground PM10 standard; and

WHEREAS, The State of Kansas and Kansas businesses and citizens have worked hard to maintain and improve air quality, with the knowledge that clean air is good for the environment, the economy and people's health and quality of life; and

WHEREAS, Kansas is very proud of its continually improving air quality, with the entire state in attainment for all air quality standards and the Kansas City metropolitan area among the largest cities in the United States in attainment for these standards; and

WHEREAS, There is very little existing PM2.5 monitoring data, and there is considerable uncertainty about the scientific validity of the theories, data and conclusions upon which the proposed NAAQS are based and the cost and feasibility of compliance; and

WHEREAS, Agriculture is the number one industry of this state and the additional PM2.5 standard being considered could result in many more nonattainment areas in Kansas because of the impact of normal and approved agricultural practices; and

WHEREAS, Expensive pollution prevention programs would impose a significant economic burden on the citizens of the State, especially in rural Kansas, without commensurate air quality benefits and without a practical means to achieve the additional standard or the ability to attain compliance; and

WHEREAS, a more stringent ozone standard could result in the Kansas City metropolitan area's being designated as "nonattainment" simply because of a change in the standard, not because of a change in air quality, thus imposing significant economic, administrative and regulatory burdens on more citizens, businesses and local governments in this state; and

WHEREAS, The states of Kansas and Missouri have designated the Mid-America Regional Council to work cooperatively with all stakeholders to recommend a plan to maintain and improve Kansas City air quality and the Council has now submitted recommendations for a comprehensive program to further improve air quality in the Kansas City metropolitan area; and

WHEREAS, The Department of Health and Environment is monitoring air quality to determine the levels of naturally occurring particulate matter in the air of this state; Now, therefore,

Be it resolved by the Senate of the State of Kansas, the House of Representatives concurring therein: That the Mid-America Regional Council is commended for its public participation process, which included all stakeholders in the development of its recommendations, and is encouraged to continue to include all affected stakeholders when beginning consideration of implementation of its recommendations; and

Be it further resolved: That the Legislature supports all current air quality standards and opposes a separate standard for PM2.5 at this time and opposes any change in the ozone standard until such time as the positive benefits of any new air quality programs in the Kansas City metropolitan area have been realized; and

Be it further resolved: That the Legislature urges the EPA to continue studying the need for changes in the National Ambient Air Quality Standards but to approve any change only after a cost benefit analysis and a risk assessment, similar to those required for environmental rules and regulations pursuant to K.S.A. 77-416 and amendments thereto, demonstrating the environmental benefit and economic impacts for each unique air shed such as the high plains of Kansas; and

SENATE CONCURRENT RESOLUTION No. 1608—page 2

Be it further resolved: That the Secretary of State be directed to send enrolled copies of this resolution to the Executive Director of the Mid-America Regional Council, to the Administrator of the United States Environmental Protection Agency for consideration as written testimony for Docket Nos. A-95-54 and A-95-58 and to each member of the Kansas congressional delegation.

I hereby certify that the above CONCURRENT RESOLUTION originated in the SENATE, and was adopted by that body

February 26, 1997

SENATE concurred in HOUSE amendments April 2, 1997

President of the Senate.

Pat Saville

Secretary of the Senate.

Adopted by the HOUSE as amended April 1, 1997

Speaker of the House.

Chief Clerk of the House.

SENATE CONCURRENT RESOLUTION No. 1609

A CONCURRENT RESOLUTION concerning the Ozone Transport Assessment Group (OTAG).

WHEREAS, The federal environmental policy for the nation as established by Congress through the enactment of the Clean Air Act and its amendments has established a very aggressive and ambitious program for meeting the health-based ozone air quality standard throughout the United States; and the states are primarily responsible for meeting these program requirements through the development of state plans; and

WHEREAS, The Ozone Transport Assessment Group (OTAG) - whose membership is composed of the 13 Northeastern States in the Ozone Transport Commission, the 24 states from the Midwest and South and the United States Environmental Protection Agency (EPA)- was established specifically to work together to address these issues; and

WHEREAS, OTAG is working within a very short time frame to scientifically assess the ozone transport issue and develop acceptable recommendations to deal with the problems and the scientific and technical credibility of the work being done is critical to the success of this effort; and

WHEREAS, Kansas and other states across the nation have spent billions of dollars to comply with the Federal Clean Air Act and its provisions and costly emission restrictions have the potential to adversely impact state environmental programs, the price of energy and the ability of the industries, businesses and people of Kansas to compete in the global marketplace; Now, therefore:

Be it resolved by the Senate of the State of Kansas, the House of Representatives concurring therein: That the Legislature encourage the EPA to allow the states to work together to complete the technical assessment of the ozone transport issues within OTAG and call upon the EPA to allow adequate time to complete all of the extensive technical work required, including the complex computer modeling which is underway and upon which many major policy decisions may rest. This is essential given the high economic stakes which are at risk in this effort and the probability that actions by the state or people of Kansas will have little, if any, effect on the air quality of other states; and

Be it further resolved: That the Legislature endorse the scientific assessment of nitrogen oxide and ozone transport issues currently under development by OTAG, and specifically call upon the EPA to allow this group adequate time to complete and verify the accuracy of a massive computer model upon which the economic future of the Midwest may well rest, and reject the short, arbitrary deadlines which will impede ensuring the validity of that model and the practice of sound science; and

Be it further resolved: That the Legislature call upon the EPA and OTAG to encourage the active participation of governors and other elected officials in OTAG; and to refrain from actions or decisions in the absence of such participation that would have the effect of imposing on Kansas regulatory requirements in excess of and in addition to those already specified by the Clean Air Act, as amended; and

Be it further resolved: That the Legislature call upon OTAG to ensure that any strategy selected is based on sound science and is the most cost-effective means of reducing transported ozone; and

Be it further resolved: That the Legislature request that the recommendations ultimately produced by OTAG be carefully reviewed and considered by the 37 states and, if the recommendations are beyond the legislative authority currently contained in the Clean Air Act, then a joint legislative proposal should be agreed upon for United States congressional consideration; and

Be it further resolved: That the Legislature call upon OTAG to carefully consider the states to be included in any recommended control strategy with respect to distance from any serious or severe nonattainment area, number and size of emission sources, current attainment status of ozone standards, and insignificant impact on any ozone nonattainment area in the Eastern United States; and

SENATE CONCURRENT RESOLUTION No. 1609—page 2

Be it further resolved: That the Legislature request that OTAG, before a final recommendation is submitted to the EPA, provide affected state legislatures with the final recommended strategy along with the estimated cost of compliance; and

Be it further resolved: That the Secretary of State be directed to send enrolled copies of this resolution to OTAG, the Administrator of the United States Environmental Protection Agency and each member of the Kansas congressional delegation.

I hereby certify that the above CONCURRENT RESOLUTION originated in the SENATE, and was adopted by that body

February 28, 1997

SENATE concurred in HOUSE amendments April 2, 1997

Dick Bond
President of the Senate.

Pat Saville
Secretary of the Senate.

Adopted by the HOUSE as amended April 1, 1997

Jim Shallenburger
Speaker of the House.

Judith E. Jones
Chief Clerk of the House.

Mr. MCINTOSH. Cindi, could you report how much time each side has?

The CLERK. The majority, 1 minute 45 seconds; minority, 4 minutes.

Mr. SANDERS. Mr. Kanjorski.

Mr. KANJORSKI. Thank you very much, Mr. Chairman.

First of all, I would like to congratulate EPA in meeting the tight deadlines and difficulty with which they have been dealt with on this particular issue. But I do want to express some concerns, particularly as this relates to the Commonwealth of Pennsylvania.

It seems to me as we promulgate new rules and regulations of this sort we should really separate them into areas, not only the promulgation of the rule and regulation but the implementation of the rules and regulations. And those of us that live on the eastern seaboard or get the prevailing winds from the west or from the south, as the Commonwealth of Pennsylvania does, we seem to be in a no-win situation.

The air coming into Pennsylvania from the west and from the south is already dirtier than the standards provided by these regulations. If we were to carry and just allow that standard to exist, it means Pennsylvania, for all intents and purposes, has to close down economic development over the future period of time. That is unacceptable.

It seems to me that we have to look at where this air comes from and hold those States and those regions of the country more responsible; and we should go to the source of the pollution, rather than the result of where the pollution ends.

The Commonwealth and the people of the Commonwealth are willing to share their burden for clean air, and we want clean air and want to perform exactly what EPA is trained to perform with these standards. But it is in the spirit of equity for the Commonwealth and its citizens and its potential thwarting of its economic growth in the future that we really have to pay attention to.

We can't revitalize our urban centers and take people off welfare if we can't create jobs. We basically have laid down a policy here that will say the Commonwealth of Pennsylvania can't grow any further, it can't provide a better quality of living economically for its citizens because it just can't get into the game of economic competition.

Yet as I look to my colleague, the chairman from Indiana, many of his plants are sending up the pollutions and putting up higher stacks so the air doesn't land in Indiana or Ohio but lands, in fact, in Pennsylvania. My friend from Ohio also has the same problem. The air pollution caused there by the generating plants are flowing directly into Pennsylvania and not into Ohio, as a result of precautions previously taken by the industries in those States and the regulations that allowed for the increase of the size of the air stack and other such circumventions of good public policy.

I would suggest that the EPA should undertake a cooperative effort, that the States and the regions come together and perhaps empower the Ozone Transport Commission to address such challenges as equity and economic development, and that we really sit down and say, maybe as a national policy, that EPA regulations have negative impacts on certain regions or certain States. If that

be the case, certain other implementations of Federal policy should be put into place to augment the deleterious effects of the air standard quality on the economic development of a particular area—and particularly the Commonwealth of Pennsylvania.

Other than that, I want to support the administration and the EPA in implementing clean air standards. It is something we have to get to and we will. I think fighting about the scientific studies perhaps stretches the imagination. We can go on indefinitely studying, but we all have to recognize we have a very bad condition in air that should be corrected.

However, it is vitally important that a broad national policy going beyond EPA and perhaps as to economic policy for the Government as to where we put our assets and how and what type of industry we encourage in these various regions that are negatively impacted by these new standards should be undertaken.

[The prepared statement of Hon. Paul E. Kanjorski follows:]

Mr. Chairman, thank you for allowing me to speak briefly about the pending rulemaking by the Environmental Protection Agency (EPA) to strengthen our nation's rules regarding particulate matter and ground-level ozone. I appreciate the efforts of this committee to look into issues related to this proposed regulation.

First, let me begin by commending the efforts of EPA to issue a regulation under an extremely tight deadline. I also want to congratulate the agency on working effectively in the past to implement the Clean Air Act and its amendments. These laws, the agency's efforts, and the actions of many others have made the air we breathe dramatically cleaner and significantly improved public health over the last two decades.

While EPA has done a commendable job of issuing the proposed regulations, I also have several concerns about the effects that these new rules will have on the country, and especially on Northeastern Pennsylvania. As a consequence of the new standard, several counties in Northeastern Pennsylvania will likely no longer meet the requirements of the Clean Air Act. One of those counties includes Luzerne County, the largest jurisdiction in my congressional district.

My concerns about EPA's proposed standards are twofold. First, I am concerned about equity. Monitoring shows air coming into Pennsylvania is already dirtier than the new standard proposed by EPA. That is because polluted air flows into the Commonwealth from the states to our west and south. In fact, Pennsylvania's dirty air comes from places like coal-powered electrical generation facilities in Ohio and factories in the Chairman's home state of Indiana. It also originates in places like Washington, DC, as a result of our actions.

Although a more stringent standard may require upwind states to make reductions to address local attainment issues, their actions may not be significant enough to help prevent violations and sanctions in Pennsylvania. Moreover, these potential sanctions against Pennsylvania seem particularly unfair. As I understand, the state has already adopted a variety of air pollution controls that often exceed the protections adopted by many of the states that contribute to our air pollution violations. Thus, I am concerned that the new rules may penalize Pennsylvania for a problem that it did not create.

Beyond the issue of equity, I am also concerned about the effect of EPA's proposed regulations on future economic development across the country and in Northeastern Pennsylvania. EPA's current proposal, according to its own analysis, will transform hundreds of counties into non-attainment areas. These counties, which include many of our nation's urban areas like Wilkes-Barre, will face a uncertain future that could include restrictions on growth and a disruption of federal highway funding. Such uncertainty may result in decisions by business executives to build facilities in attainment areas instead of undertaking expansions or opening new sites in non-attainment areas, even though more people needing jobs often live in our urban centers. Hence, if the Administration implements the standards as proposed, they could conflict with the goal of revitalizing our nation's urban centers. The new standards could also hamper the Administration's efforts to move people to the world of work under the welfare reform law enacted by Congress last year.

Ever since coming to Congress, I have supported efforts to clean up the environment, and I remain fully committed to the goal of safe and clean air for all of our citizens. Therefore, I feel obligated to offer a policy alternative for EPA to contemplate.

Although the Clean Air Act may not require EPA to provide such guidance in advance of, or in coordination with, issuing the final rule, the Administration should develop flexible implementation policies to address today's problems with effective solutions based on sound analysis. Far too often, federal regulatory agencies separate the promulgation of rules from the implementation of rules. This separation can cause public frustration and lead to legitimate criticisms. As part of such an implementation plan, EPA should consider promoting cooperation among the states and region-wide controls to address such challenges as equity and economic development.

In another arena, Pennsylvania and other states have effectively worked with EPA toward a the goal of improving water quality in the Chesapeake Bay. These successful cooperative efforts have focused on abating the flow of pollutants from major sources, such as the acid mine drainage that originates in my congressional district and which lowers the water quality of the Chesapeake Bay.

As for efforts to clean our nation's air, EPA could empower the Ozone Transportation Commission. This Commission was, as you know, formed in

1990 by Congress to address the problem of transmission of ground-level ozone and particulate matter across state lines in the Northeast. In short, issuing common-sense implementation procedures like enhancing the powers of the Ozone Transport Commission in conjunction with the final rule will help increase public support for the standard. They will also allow the agency to abate air pollution at its source and to address issues like equity and economic development.

In conclusion, while I do not condone to the distorted scientific and substantive criticisms raised by some of the opponents of EPA's proposed rule, I do believe that these pending standards raise difficult issues that the Administration should carefully consider before it issues any final rules. In the 105th Congress, I hope that we will have more occasions to examine such issues as equity and the future of economic development as they relate to EPA's proposed clean air standards, and I encourage officials with the Administration to address them in their comments today. In particular, I hope that EPA will take steps to assure me that other states carry out their fair share to clean up polluted air coming into Pennsylvania.

Finally, thank you again, Mr. Chairman, for allowing me to speak on behalf of the people of Northeastern Pennsylvania on this important issue.

Mr. MCINTOSH. Thank you, Mr. Kanjorski.

Let me confirm, Cindi, a minute and three-quarters on our side?

The CLERK. One minute left on the minority.

Mr. SANDERS. I would suggest unanimous consent for one additional minute on either side.

Mr. MCINTOSH. Sure. I don't know whether Bob will take it; but for the remaining time on our side, I recognize Representative Barr from Georgia.

Mr. BARR. Thank you, Mr. Chairman. I do have a statement that I will read in just a moment.

I am intrigued by the ranking member's and the Administrator's great concern for the children and their ability to breathe easier. It was a hearing that I recall us having 2 years ago on Waco. Apparently, the most vulnerable among us at that point, the several dozen men, women and children, yes, dozens of children, who were gassed to death by our administration were not quite worthy of this great concern. I just would hope that this concern will be a continuing one and something that will apply to children everywhere in our country in all circumstances, not just those that we can speak glowingly in theory about.

Mr. Chairman, I appreciate your holding this hearing for the purpose of examining the legal problems surrounding the way in which the EPA has gone about its rulemaking with regard to particulate matter in the ozone. Because so much is at stake in these proceedings, it is extremely important that EPA's rulemaking conform with legal requirements. Unfortunately, as you have pointed out, EPA has committed numerous errors in its enthusiasm to saddle State and local governments and small businesses with new and costly undertakings.

Among the most serious infirmities is that explained in a petition filed with EPA last month to disqualify Administrator Browner for prejudgment of these important matters. In that petition, Administrator Browner is quoted repeatedly as having made up her mind to move ahead with finalizing the rules before the rules are finalized.

The entire purpose of rulemaking, of course, is to engage in a fact-finding and deliberative process that conforms with the law, that will culminate in conclusions fairly reached and defensible in a court of law. Prejudging the results of such a process, as the Administrator appears to have repeatedly done, defeats the very idea of sound rulemaking.

While prejudging the rulemaking proceeding is never advisable, it is especially troublesome in this matter. As pointed out, for example, by Senators Byrd, Glenn, Ford, Rockefeller and Robb in a letter to the Administrator just last month, compliance with this $8.5 billion rule will impose another extremely costly and complex layer on top of existing regulations in this area. These five Senators all urged the EPA to reaffirm current standards, conduct additional monitoring of particulate matter and related air quality issues and allow our States to complete action on the ambitious clean air standards that are already in place.

Yet rather than heed these warnings, Administrator Browner has charged ahead of her own Agency's obligation to consider the technical, scientific and legal issues inherent in these proceedings,

and declared that she will "not be swayed" by any evidence that is contrary to moving ahead to finalize the proposed rules.

Mr. Chairman, I do not think anyone, including, most importantly, any judge, could be swayed that the Administrator has not already made up her mind on this matter. I agree with the petitioners who seek her recusal from this proceeding; and if the EPA continues to engage in the same administrative proceedings, I believe we in the Congress are duty-bound to retrieve the authority which we have entrusted to it.

Thank you, Mr. Chairman.

Mr. MCINTOSH. Representative Sanders, I believe, for the remainder of your time?

Mr. SANDERS. Mr. Waxman. I believe we have 2 minutes.

The CLERK. Two minutes, sir.

Mr. WAXMAN. Thank you very much, Mr. Chairman.

I think it is peculiar to hear a Member of Congress talk about how the administrators will not be swayed by contrary evidence, before he has heard the testimony which may sway his decision on this issue.

We heard some important testimony at our last hearing; and while I would like to do things like stop the proliferation of handguns that kill our children, the witnesses at the last hearing told us we can do something about the impact on asthmatic kids from ozone and particulate matters that are now called safe but are not safe because so many kids end up in the emergency room of a hospital when an asthmatic attack is triggered.

There is clearly a consensus among health experts and in the medical community about the problems from particulate matter and ozone. We heard from Rick Russman, a Republican State Senator from New Hampshire, who said these standards would spur economic growth. We heard from Assemblyman Richard Brodsky from New York, who talked about how benefits are understated and that if we are to monetize and quantify the health and welfare ecological benefits, the case for lowering the ozone and PM standards would be virtually impossible to dispute.

Dr. William Schlesinger an environmental chemist from Duke, told us there are tremendous environmental benefits, not just to human health, but forest reduction and acid rain and protection of our coastal estuaries; and Bruce Bertelsen, a representative of the Manufacturers of Emissions Control Association, which are the companies that actually make the pollution control equipment, indicated that when the strategies are developed by EPA that the costs are overestimated and often the small businesses that manufacture these small business devices help spur our economy.

There are a lot of reasons for the rule. I think there are a lot of things to consider against the rule. EPA ought to be open to all views. That is your job.

The chairman designated this hearing as EPA above the law. I haven't heard any reason to believe you are; but let me remind you, as you consider your rulemaking, look at the health effects, look at the reasons for changing the standards, look at the impact it is going to have on our society and give us your best judgment. And we will see if all the people that are telling us you are wrong will be pressing us to do anything about it.

Thank you, Mr. Chairman, for this chance to make these remarks.

I would like to ask unanimous consent to put my full statement in the record.

Mr. MCINTOSH. Seeing no objection, certainly we will include the full remarks into the record.

[The prepared statement of Hon. Henry A. Waxman follows:]

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MEMBER
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DEMOCRATIC STEERING COMMITTEE

Statement of

HENRY A. WAXMAN

April 23, 1997

Mr. Chairman, today we continue our hearing on EPA's proposed revisions to the national ambient air quality standards for ozone and particulate matter.

This hearing has been entitled, "Is EPA Above the Law?" Besides the Chairman's allegations, we have been shown no reason to think that EPA has acted improperly or illegally. On the contrary, last week we heard the testimony of many witnesses who seemed to bolster EPA's case for revisions to the air quality standards.

First, we heard the testimony of Dr. Munzer, a pulmonary specialist, who testified that ozone and fine particulate matter triggers asthma attacks as well as other repiratory problems. This is a well-known and undisputed fact in the medical community. He warned against trivializing the health concerns of asthmatic children, stating that asthma is a form of suffocation.

We heard the testimony of Rick Russman, a Republican State Senator from New Hampshire. He testified as to the broad support for these rules in the Northeast and said that, in his view, these standards would "spur economic growth."

Assemblyman Richard Brodsky from New York also testified. He methodically documented how benefits of these proposed standards are underestimated and stated that "If EPA were to monetize and quantify the health and welfare, ecological and economical benefits . . ., the case for lowering the ozone and PM standards would be virtually impossible to dispute."

Additionally, we heard from Dr. William Schlesinger, an environmental chemist from Duke University. He outlined the tremendous environmental benefits of these proposed standards-- protection of forests, reductions in acid rain, and protection of our coastal estuaries. He documented the environmental degradation caused by air pollution in one of the hardest hit areas-- Tampa Bay, Florida.

Finally, we heard from Mr. Bruce Bertelsen of the Manufacturers of Emission Controls Association. This association represents the companies that actually make pollution control equipment. He testified that the experience of his association is that control

costs predicted by EPA have always tended to be higher than the actual costs turn out to be.

Mr. Bertelsen also stated that compliance strategies that likely will emerge if the air quality standards for ozone and PM are revised will focus on the largest emitters, which are typically not small businesses. Ironically, many of the suppliers for emission controls are small businesses and they may actually receive an economic boost by these proposed standards.

This testimony has highlighted the fact that we do not need to choose between environmental protection and a healthy economy. In fact, protecting our environment is a significant industry in itself. For instance, employment in environmental protection totalled over 1,200,000 in 1994 and brought in a revenue of over $170 billion dollars. Additionally, it turns out that states with the strongest environmental laws tend to have the strongest economies.

I hope that this hearing will put to rest the unfounded attacks against EPA.

Mr. MCINTOSH. Thank you, Ms. Browner, for waiting. I wanted to let you and the other witnesses know, who will be sworn in later, we are not singling you out in any way. It is a standard policy in our committee and subcommittee to swear in all of our witnesses.

Our first witness on this panel is the Administrator of EPA, Mrs. Carol Browner, who really needs no further introduction. Thank you for coming. Your entire written testimony will also be included in the record. Feel free to summarize it or extrapolate from there if you feel like it.

STATEMENT OF CAROL BROWNER, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY MARY D. NICHOLS, ASSISTANT ADMINISTRATOR, AIR AND RADIATION; AND JONATHAN CANNON, GENERAL COUNSEL

Ms. BROWNER. Thank you, Mr. Chairman and members of the subcommittee, for inviting me here to discuss the Environmental Protection Agency's proposed revisions to the national ambient air quality standards for particulate matter and ozone, better known as soot and smog.

Joining me today is Mary Nichols, the assistant administrator at EPA for air and radiation; and John Cannon, the general counsel to the Environmental Protection Agency.

Mr. Chairman, the title of this hearing asks a straightforward question, so let me begin my testimony with a straightforward answer: EPA is doing precisely what the law, the Clean Air Act, tells us to do, and that is, protect the health of the American people above all else. EPA respects the law; EPA is abiding by the law; EPA is guided by the law.

As you have correctly pointed out, Mr. Chairman, there are a multitude of Federal laws, Executive orders, administrative procedures, bureaucratic directives, that must be regarded in the process. Let me be clear. It is a good process. It ensures that in the end we know exactly what we might be getting the country into when we consider revising the air quality standards.

But as important as any process is, let us remember that process is not an end unto itself; it is designed to take us somewhere. When the day is done, it has to leave us with the best public policy to protect the health of the American people. That is what the law, the Clean Air Act, requires us to do.

All of the requirements, procedures, directives, that we must follow when we consider setting or revising air quality standards, all of them must be viewed in light of the Clean Air Act's mandate that, first and foremost, we do what we can to protect every American from the adverse health effects of breathing polluted air.

Born in a spirit of bipartisanship under President Nixon, amended and strengthened under President Carter and President Bush, the broad mandate of the Clean Air Act is simple: Protect the public health first, and do it with an adequate margin of safety based on the latest, best, and most reliable scientific evidence.

The law sets forth a specific procedure for periodic review of the air standards. It lays out a process for determining what the best available science is. It requires EPA to obtain outside, independent review by leading scientists from academia, research institutes,

public health organizations, and industry. It obligates us to consider comments from anyone who wants to weigh in on proposed revisions. And Congress wisely decided to require this review every 5 years to ensure that public health protections are, in fact, based on the best available current science.

Finally, if the science warrants a revision in the standards, the law then sets forth a reasonable and rational procedure for implementation and ensuring that that implementation is carried out in the most common sense, cost-effective way over a very lengthy phase-in period.

That said, Mr. Chairman, let me reiterate, the EPA has gone to extraordinary lengths to adhere to these provisions of the law. In fact, I think it is safe to say in this particular case, EPA has undertaken the most extensive scientific review and public outreach process ever conducted for a public health standard.

Mr. Chairman, this is not, as you have stated, an irresponsible rush to judgment; it is a multiyear, carefully managed process. Our review of particulate matter has been conducted over the better part of the past decade. It has been two decades since a thorough review of the ozone standard was completed. We have considered all of the latest, best scientific evidence and submitted it to an independent review, some 250 studies on ozone and PM, all of it published, all of it peer reviewed, all of it fully debated; literally, peer review of peer review of peer review.

The overwhelming body of independently reviewed evidence has told us that the current standards for smog and soot are not sufficient to protect the public's health with an adequate margin of safety. That is why, in accordance with the Clean Air Act, EPA has proposed to tighten these standards.

Now, it is important to remember that the process has not been fully played out. These are only proposed standards. No final decision has been made. We are still analyzing and evaluating the extensive public comment we received, thousands upon thousands of letters, e-mails, phone calls, to a toll-free hot line.

But let me assure the committee that, at the end of the line, there will be a decision to revise or not to revise. That is what the Clean Air Act promised the American people every 5 years, and that is what we will do.

Mr. Chairman, I deeply appreciate your specific concerns and those of other members of this subcommittee and the Congress about EPA's compliance with a host of other laws and directives and the process of reviewing the public health air standards. We have worked very hard to address those concerns.

Specifically, we have taken significant measures to expand the advisory role of small businesses and other small entities in the process of setting and implementing any revised standard, if indeed the decision is made to revise the standards, while respecting the critical role State and local governments must play in ultimately meeting the standards.

We have, as you know, Mr. Chairman, submitted these proposed standards to an extensive and ongoing and often spirited interagency review process, and, for informational purposes, we have carefully assessed the projected costs and benefits of these proposals.

In fact, the Clean Air Act says that EPA cannot consider the cost to industry of reducing their pollution of the public's air in the standard-setting stage of the process. The law says we have to go to where the science takes us. We have to put the public health first. We have to save consideration of cost-benefit analyses for the implementation phase.

And on that note, Mr. Chairman, we take very seriously our responsibility to work with the States, local governments, businesses large and small, to find the most common-sense, cost-effective ways to implement any revisions to the air standards if in the end revisions are, in fact, adopted.

Mr. Chairman, one of the primary intentions of the Clean Air Act is truth in Government. The act is designed specifically to prevent us from ever getting to a point where the Government tells Americans their air is healthy to breathe when, in fact, it is not. That is why the law puts the public health above all else.

Have we reached the point where, for the first time over the successful 26-year history of the Clean Air Act, Americans would elevate other concerns above their own health, the health of their children? That, Mr. Chairman, is for Congress to ultimately decide. In the meantime, EPA will adhere to the law.

Thank you, Mr. Chairman. I am more than happy to answer any questions.

[The prepared statement of Ms. Browner follows:]

TESTIMONY OF CAROL M. BROWNER
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES, AND REGULATORY AFFAIRS
OF THE
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
U.S. HOUSE OF REPRESENTATIVES

April 23, 1997

Mr. Chairman, Members of the Subcommittee, thank you for inviting me to discuss the Environmental Protection Agency's (EPA's) proposed revisions to the national ambient air quality standards for particulate matter and ozone.

On these two pollutants, over the past three-and-a-half years, EPA has conducted one of its most thorough and extensive scientific reviews ever. That review is the basis for the new, more stringent standards for particulate matter and ozone that we have proposed in order to fulfill the mandate of the Clean Air Act.

On average, an adult breathes in about 13,000 liters of air each day. Children breathe in 50 percent more air per pound of body weight than do adults.

For 26 years, the Clean Air Act has promised American adults and American children that they will be protected from the harmful effects of dirty air -- based on best available science. Thus far, when you consider how the country has grown since the Act was first passed, it has been a tremendous success. Since 1970, while the U.S. population is up 28 percent, vehicle miles travelled are up 116 percent and the gross

domestic product has expanded by 99 percent, emissions of the six major pollutants or their precursors have dropped by 29 percent.

The Clinton Administration views protecting public health and the environment as one of its highest priorities. We have prided ourselves on protecting the most vulnerable among us -- especially our children -- from the harmful effects of pollution. When it comes to the Clean Air Act, I take very seriously the responsibility the Congress gave me to set air quality standards that "protect public health with an adequate margin of safety" -- based on the best science available.

The standard-setting process includes extensive scientific peer review from experts outside of EPA and the federal government. Based on the best available science, I have proposed new standards for particulate matter and ozone that I believe are required to protect the health of the American people.

Under the law, we are not to take costs into consideration during the standard setting phase of the process. This has been the case through six Presidential administrations and 14 Congresses, and has been reviewed by the courts. We believe this approach remains appropriate. However, once we revise any given air quality standard, it is both appropriate and, indeed, critical that we work with states, local governments, industry and others to develop the most cost-effective, common-sense strategies and programs possible to meet those new health standards.

I want to be clear that at this point we have only proposed revisions to the standards for these two pollutants. We take very seriously our obligation to carefully consider all public comments on these proposals before making a final decision. We

have heard from small businesses, industry, state and local governments, and other citizens like the elderly, children, doctors and people with asthma. While we have proposed specific levels for each pollutant, we also asked for comment on a wide range of alternative options. I do not intend to make a final decision until comments on all of those alternative options have been carefully considered.

I would like to describe for you the basis for my recent decisions to propose revisions to the particulate matter and ozone standards. I would also like to discuss some of the innovative approaches we are undertaking to ensure that any newly revised standard would be met in the most common-sense, cost-effective way possible.

Background

The Clean Air Act directs EPA to identify and set national standards for certain air pollutants that cause adverse effects to public health and the environment. EPA has set national air quality standards for six common air pollutants -- ground-level ozone (smog), particulate matter (measured as PM-10, or particles 10 micrometers or smaller in size), carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide.

For each of these pollutants, EPA sets what are known as "primary standards" to protect public health. EPA can also establish "secondary standards" to protect the public welfare, including the environment, crops, vegetation, wildlife, buildings and monuments, visibility, climate, soils, water, economic value, and so forth.

Under the Clean Air Act, Congress directs EPA to review these standards for each of the six pollutants every five years. The purpose of these reviews is to determine whether the scientific research available since the last review of a standard

indicates a need to revise that standard. The ultimate purpose is to ensure that we are continuing to provide adequate protection of public health and the environment. Since EPA originally set the national air quality standards (most were set in 1971), only two of EPA's reviews of these standards have resulted in revised primary standards -- in 1979, EPA revised the ozone standard to be less stringent; and in 1987, EPA revised the particulate matter standard to focus on smaller particles (those less than 10 micrometers in diameter), instead of all sizes of suspended particles.

By the early 1990's, about 3,000 new studies had been published on the effects of ozone and there was an emerging body of epidemiological studies showing significant health effects associated with particulate matter. EPA was sued by the American Lung Association to complete its ongoing ozone review and make decisions on both the ozone and particulate matter standards. In March 1993, I announced my decision not to revise the ozone standards at that time and committed to accelerate the next review in light of new scientific evidence on human health effects. A number of public peer review meetings were held on the new studies and on the draft Criteria Document throughout 1993. Soon afterwards, in February 1994, I issued a Federal Register notice committing the Agency to meeting an expedited schedule for completion of the scientific assessment and review of the standards. The scientific analysis and review for both pollutants are completed and EPA proposed revisions to the two standards late last year. I have previously stated my intention to announce final decisions on both pollutants by July 19, 1997.

Although the reviews for both the ozone and particulate matter standards have been accelerated, I gave them very high priority and focused the necessary resources on them to ensure that we conducted an exhaustive and open review of the science. The criteria documents alone were six inches thick for particulate matter and three inches thick for ozone. I believe that our decision-making process on ozone and particulate matter has been thorough, complete and, as I will describe, based on extensive peer-reviewed science.

Extensive Scientific Review Process Used to Review the Ozone and Particulate Matter National Air Quality Standards

EPA undertakes an extensive scientific and technical assessment process during the standard review for each air pollutant. This includes developing (1) a "criteria document" which reflects the latest scientific knowledge on the kind and extent of all identifiable effects on public health or welfare of the pollutant, and (2) a detailed scientific and technical assessment, known as a "staff paper." Using information in the criteria document, the staff paper arrays a range of policy alternatives based on the scientific evidence and makes recommendations to me. Both of these documents go through extensive public and external scientific peer review.

The "criteria document" is a comprehensive assessment that includes hundreds or sometimes thousands of studies that have been published in peer review journals. My Office of Research and Development holds a series of peer review workshops on draft chapters of the criteria document. Once the entire document has been completed

in draft form, it is further reviewed by the public and the Clean Air Scientific Advisory Committee, or CASAC.

As you know, the CASAC is a Congressionally established panel of external science experts appointed by EPA. During the review for each air pollutant, the panel is augmented with additional scientific and technical consultants who have expertise related to that pollutant and its effects. In total, there were 21 scientists and technical experts from academia, research institutes, public health organizations and industry who reviewed the particulate matter criteria document and staff paper, and 16 who reviewed the ozone criteria document and staff paper. The recent ozone and particulate matter CASAC reviews were chaired by George Wolff, an atmospheric scientist from General Motors. CASAC meetings are open to the public.

The CASAC panel reviews the draft criteria documents and the key underlying studies, and makes recommendations for revisions to the criteria document. Industry, state and local agencies, and other members of the public also submit extensive comments on the draft criteria documents. My staff then revises the document and submits it for another review by the CASAC and the public. This process sometimes repeats itself two or three times until the CASAC sends EPA what is known as a "closure" letter, pronouncing the criteria document as adequate to be used as a basis for a decision on whether or not a given standard should be revised.

Staff in my Office of Air and Radiation also develops a "staff paper." The purpose of the staff paper is to identify the most policy-relevant information contained in the criteria document and the critical elements that the EPA staff believes should be

considered in the review of the standards. The staff paper typically includes quantitative exposure and risk analyses. This document also includes staff recommendations of ranges of alternative standards that should be considered in any decision I may make on revising a standard. Like the criteria document, this draft staff paper is subject to review by the public and the CASAC panel. And like the criteria document, the staff paper often undergoes two or more reviews -- where the scientific panel recommends changes and my staff responds to those recommendations -- before the CASAC issues a letter of "closure" on it as well. At that point the staff paper, along with the criteria document, is ready for me to use in deciding whether it is appropriate to propose any revisions to the standards.

Public Involvement in the Ozone and Particulate Matter Decisions

Throughout the three-and-a-half year process of developing our proposed standards, we have remained committed to analyzing the science in an open public forum and ensuring broad public input. In February 1994, for example, we published in the Federal Register the schedule we intended to follow for the review of the ozone standard which identified the opportunities for public comment and public meetings.

Each meeting held with the CASAC on criteria documents and staff papers is open to the public. For the ozone and particulate matter reviews, we held 11 CASAC meetings totaling more than 124 hours of public discussion on the criteria documents and staff papers. All of these meetings were announced in the Federal Register and open to the general public. In addition to the public meetings and the public review and

comment on the criteria documents and staff papers, the public has had several other opportunities to provide input to a decision on the ozone and particulate matter standard revisions.

In June 1996, EPA published in the Federal Register an Advance Notice of Proposed Rulemaking describing the key issues under consideration and time frames for decisions on the two standards. In July 1996, we held national public meetings in Philadelphia and St. Louis, where we presented these key issues and options we were considering on the two standards and received extensive comments from the public. About 100 representatives of industry, state and local governments, and members of the public provided comments at those meetings.

When I announced the proposed revisions last November, I established a virtually unprecedented system for the public to provide their comments. In addition to the normal docketing process for receipt of public comments, I had a national toll-free telephone hotline (1-888-TELL-EPA) established to encourage the broadest amount of public comment possible. During the public comment period EPA received more than 14,000 calls from the public.

We have also made several key documents, including the staff papers, criteria documents, and risk assessments, available to the public over the Internet. We established a system for people to submit their comments via E-mail over the Internet. We received more than 4,000 comments through E-mail during the public comment period. Again, my goal was to encourage the broadest array of public comment possible.

We also held two days of public hearings on the proposed standard revisions in each of three cities -- Salt Lake City, Chicago and Boston. In addition, we held a day-long public hearing in Durham, North Carolina on our associated proposal for air quality monitoring for particulate matter. At these hearings, more than 400 citizens and organizations provided testimony about their views of our proposed standards.

We have taken other steps to expand the public discourse on these matters. We have held two national satellite telecasts broadcast around the Nation to answer questions on the standards from officials from state and local governments, industries and other groups. We also worked with the Air and Waste Management Association, a national organization of industry, government and other air pollution control experts, to hold public meetings on the new standards at more than ten different locations. Beyond that, my regional offices have held public forums around the Nation to discuss the issues associated with any possible revision to these air quality standards. My regional office staff also participated in hearings that states such as California, Texas and Washington and cities like New York City held on these proposed standard revisions.

Rationale for EPA's Proposed Revision of the Ozone Standards

Since the mid-1980's, there have been more than 3,000 scientific studies published that are relevant to our understanding of the health and environmental effects associated with ground-level ozone. These peer-reviewed studies were published in independent scientific journals and included controlled human exposure

studies, epidemiological field studies involving millions of people (including studies tracking children in summer camps), and animal toxicological studies. Taken as a whole, the evidence indicates that, at levels below the current standard, ozone affects not only people with impaired respiratory systems, such as asthmatics, but healthy children and adults as well. Indeed, one of the groups most exposed to ozone is children who play outdoors during the summer ozone season.

Certain key studies, for example, showed that some moderately exercising individuals exposed for 6 to 8 hours at levels as low as 0.08 parts per million (ppm) (the current ozone standard is set at 0.12 ppm and focuses on 1-hour exposures) experienced adverse health effects such as decreased lung function, respiratory symptoms, and lung inflammation. Other recent studies also provide evidence of an association between elevated ozone levels and increases in hospital admissions. Animal studies demonstrate impairment of lung defense mechanisms and suggest that repeated exposure to ozone over time might lead to permanent structural damage in the lungs, though these effects have not been corroborated in humans.

As a result of these and other studies, EPA's staff paper recommended that the current ozone standard be revised from the current one-hour form (that focuses on the highest "peak" hour in a given day) to an 8-hour standard (that focuses on the highest eight hours in a given day). It also recommended setting an 8-hour standard in the range of 0.07 ppm to 0.09 ppm, with multiple exceedances (between one and five per year).

The CASAC panel reviewed the scientific evidence and the EPA staff paper and was unanimous in its support of eliminating the one-hour standard and replacing it with an eight-hour standard. While I do not base my decisions on the views of any individual CASAC member (as a group they bring a range of expertise to the process), it is instructive to note the views of the individual members on these matters. While ten of the 16 CASAC members who reviewed the ozone staff paper expressed their preferences as to the level of the standard, all believe it is ultimately a policy decision for EPA to make. All ten favored a multiple exceedance form. Of the four human health experts on the CASAC panel, three favored a level of 0.08 ppm and the other favored a level of either 0.08 or 0.09 ppm. No panel member favored a standard level of 0.07 ppm; three others favored 0.09 ppm, and one favored either 0.09 or 0.10 ppm combined with new public health advisories when ozone concentrations are at or above 0.07 ppm.

Consistent with the range of standards viewed as appropriate by CASAC scientists and included in the EPA staff paper, we proposed a new eight-hour standard at 0.08 ppm, with a form that allows for multiple exceedances, by taking the third highest reading each year and averaging those readings over three years. We asked for comments on a number of alternative options, ranging from eight-hour levels of 0.07 to 0.09 ppm to an option that would retain the existing standard. Just as a point of reference, based on our recent analysis of children outdoors in 9 cities throughout the country, the current one-hour ozone standard of 0.12 ppm is roughly equivalent to a 0.09 ppm 8-hour standard with approximately two to three exceedances.

We considered a number of complex public health factors in reaching the decision on the level and form proposed. The quantitative risk assessments that we performed indicated differences in risk to the public among the various levels within the recommended ranges, but they did not by themselves provide a clear break point for a decision.[1] EPA's risk assessments showed that there are hundreds of thousands of children not protected under the current standard who would obtain additional protection under a revised standard.

Also, consistent with EPA's prior decisions over the years, I determined that setting an appropriate air quality standard for a pollutant for which there is no discernible threshold means that factors such as the nature and severity of the health effects involved, and the nature and size of the sensitive populations exposed, are very important. As a result, I paid particular attention to the health-based concerns reflected in the independent scientific advice and gave significant consideration to the advice of the health professionals on the CASAC. This is particularly important given the fact that one of the key sensitive populations would be children active outdoors. The decision to propose at the 0.08 ppm level reflects this, because, though it is in the middle of the range recommended for consideration by CASAC and the EPA staff paper, as a policy choice it reflects the lowest level recommended by individual CASAC panel members and it is the lowest level tested and shown to cause effects in controlled human-exposure health studies. Of the four human health experts on the

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[1]CASAC itself agreed that there are a continuum of effects – even down to background – and that there is no "bright line" distinguishing any of the proposed standards as being significantly more protective of public health.

CASAC panel, three favored a level of 0.08 ppm and the other favored a level of either 0.08 or 0.09 ppm.

Finally, air quality comparisons have indicated that meeting a 0.08 ppm, third highest concentration, eight-hour standard (as proposed by EPA) would also likely result in nearly all areas not experiencing days with peak 8-hour concentrations above the upper end of the range (0.09 ppm) referred to in the CASAC closure letter and the EPA staff paper. Given the uncertainties associated with this kind of complex health decision, EPA has also looked at the reduction in people exposed to ozone concentrations that are above the highest level recommended by any member of the CASAC panel (i.e., 0.09 ppm). Recent air quality data indicate that meeting a 0.08 ppm third-highest concentration (as proposed by EPA) would result in all but 1% of areas avoiding days with peak 8-hour concentrations above the 0.09 ppm level. By comparison, a 0.08 ppm standard set at the upper end of the range of concentrations (5th highest) would result in 17% of areas exceeding the 0.09 level.

It is also important to note that ozone causes damage to vegetation including:

- interfering with the ability of plants to produce and store food, so that growth, reproduction and overall plant growth are compromised;
- weakening sensitive vegetation, making plants more susceptible to disease, pests, and environmental stresses; and,
- reducing yields of economically important crops like soybeans, kidney beans, wheat and cotton.

Nitrogen oxides are a class of the key pollutants that causes ozone. Controlling these pollutants also reduces the formation of nitrates that contributes to fish kills and algae blooms in sensitive waterways, such as the Chesapeake Bay.

As part of its review of the ozone science, the CASAC panel unanimously advised that EPA set a secondary standard more stringent than the current standard in order to protect vegetation from the effects of ozone. However, agreement on the level and form of the secondary standard was not reached.

Rationale for EPA's Proposed Revision to the Particulate Matter Standards

For the particulate matter standard review, EPA assessed hundreds of peer reviewed scientific research studies, including numerous community-based epidemiological studies. Many of these community-based health studies show associations between particulate matter (known as PM) and serious health effects. These include premature death of tens of thousands of elderly people or others with heart and/or respiratory problems each year. Other health effects associated with exposure to particles include aggravation of respiratory and cardiovascular disease, including more frequent attacks of asthma in children. The results of these health effects have been significantly increased numbers of missed work and school days, as well as increased hospital visits, illnesses, and other respiratory problems.

The recent health studies and a large body of atmospheric chemistry and exposure data have focused attention on the need to address the two major subfractions of PM-10 -- "fine" and "coarse" fraction particles -- with separate programs

to protect public health. The health studies have indicated a need to continue to stay focused on the relatively larger particles or "coarse" fraction that are a significant component of PM-10 and are controlled under the current standards. We continue to see adverse health effects from exposures to such coarse particles above the levels of the current standards. As a result, CASAC scientists agreed that existing PM-10 standards should be maintained for the purpose of continuing to control the effects of exposure to coarse particles.

However, twenty-one of the new health and atmospheric science studies have highlighted significant health concerns with regard to the smaller "fine" particles (those at or below 2.5 micrometers in diameter) or "fine" particle indicators. These particles are so small that several thousand of them could fit on the type-written period at the end of a sentence. In the simplest of terms, fine particles are of health concern because they can remain in the air for long periods, both indoors and outdoors, and can easily penetrate and be absorbed in the deepest recesses of the lungs. These fine particles can be formed in the air from sulfur or nitrogen gases that result from fuel combustion and can be transported many hundreds of miles. They can also be emitted directly into the air from sources such as diesel buses and some industrial processes. These fine particles are not only associated with serious health effects, but they also are a major reason for visibility impairment in the United States in places such as national parks that are valued for their scenic views and recreational opportunities. For example, visibility in the eastern United States should naturally be about 90 miles, but has been reduced to under 25 miles.

EPA analyzed peer-reviewed studies comparing death rates and particle concentrations in cities with populations of more than five-and-a-half million people that directly related effects of "fine" particle concentrations to human health. Another study of premature mortality tracked almost 300,000 people over the age of 30 in 50 U.S. cities. After adjusting for the other risk factors, PM-2.5 concentrations were found to be associated with a 17 % increase in total mortality between cities with the least and most polluted air.

Based on the health evidence reviewed, the EPA staff paper recommended that EPA consider adding "fine particle" or PM-2.5 standards, measured both annually and over 24 hours. The staff paper also recommended maintaining the current annual and/or 24-hour PM-10 standards to protect against coarse fraction exposures, but in a more stable form for the 24-hour standard. This more stable form would be less sensitive to extreme weather conditions.

When CASAC reviewed the staff paper, 19 out of 21 panel members recommended establishment of new standards (daily and/or annual) for PM-2.5. They also agreed with the retention of the current annual PM-10 standards. Fourteen of twenty-one CASAC members favored consideration of retention of the 24-hour PM-10 standard in a more stable form.

Regarding the appropriate levels for PM-2.5, staff recommended consideration of a range for the 24-hour standard of between 20 and 65 micrograms per cubic meter (ug/m3) and an annual standard to range from 12.5 to 20 ug/m3. Individual members of CASAC expressed a range of opinions about the levels and averaging times for the

standards based on a variety of reasons. Four panel members supported specific ranges or levels within or toward the lower end of the ranges recommended in the EPA staff paper. Seven panel members recommended ranges or levels near, at or above the upper end of the ranges specified in the EPA staff paper. Eight other panel members declined to select a specific range or level.

Consistent with the advice of the EPA staff paper and CASAC scientists, in November last year, I proposed adding new standards for PM-2.5. Specifically, based on public health considerations, I proposed an annual standard of 15 ug/m3 and a 24-hour standard of 50 ug/m3. In terms of the relative protection afforded, this proposal is approximately in the lower portion of the ranges or options recommended by those CASAC panel members who chose to express their opinions on specific levels. However, taking into account the form of the standard proposed by EPA, we understand that the proposal would fall into the lower to middle portion of the ranges or options. In order to ensure the broadest possible consideration of alternatives, I also asked for comment on options both more and less protective than the levels I proposed.

Also consistent with the advice of the EPA staff paper and fourteen of twenty-one CASAC scientists, I proposed to retain the current annual PM-10 standard and to retain the current 24-hour PM-10 standard, but with a more stable form. I also requested comment on whether the addition of fine particle standards and the maintenance of an annual PM-10 standard means that we should revoke the current 24-hour PM-10 standard.

As has been the case throughout the 25-year history of environmental standard setting, uncertainty has played an important role in decision making on the particulate matter standards. Specifically, the uncertainty about the exact mechanism causing the observed health effects has led some to argue that not enough is known to set new or revised standards. In this case, however, because of the strong consistency and coherence across the large number of epidemiological studies conducted in many different locations, the seriousness and magnitude of the health risks, and/or the fundamental differences between "fine" and "coarse" fraction particles, the CASAC scientists and the experts in my Agency clearly believed that "no action" was an inappropriate response. The question then became one of how best to deal with uncertainty -- that is, how best to balance the uncertainties with the need to protect public health.

Given the nature and severity of the adverse health effects, I chose to meet the Congressional requirement of providing the public with an "adequate margin of safety," by proposing PM-2.5 standards within the ranges recommended in the EPA staff paper and commented upon in the CASAC closure letter. I believe the levels chosen are consistent with the independent, scientific advice given me about the relationship between the observed adverse health effects and high levels of fine particle pollution. That advice led to a proposed decision toward the lower end of the range of levels for the annual standard, which is designed to address widespread exposures, and toward the middle of the range for the 24-hour standard, which would serve as a backstop for seasonal or localized effects.

One final note on particulate matter. Some have suggested we need more research before decisions are made about these standards. I strongly support the need for continued scientific research on this and other air pollutants as a high priority. However, as we pursue this research, we must simultaneously take all appropriate steps to protect public health. Because of the magnitude of the risk to the public from fine particles, I have proposed to move ahead with strategies to control these pollutants.

Access to Raw Data Underlying Ozone and Particulate Matter Health Studies

Many peer-reviewed studies have reported associations between particulate matter and premature death. In the early 1990's, several studies were published showing associations at levels below the current particulate matter standards. Some critics began raising questions about the extent to which the results could be reproduced and the availability of the underlying data. In response, EPA helped to arrange an effort to conduct a reanalysis of several such studies, by an independent group of investigators under the auspices of the Health Effects Institute (HEI), a highly respected research organization jointly funded by EPA and several motor vehicle and engine manufacturers. The original investigators of several studies, including studies conducted at Harvard University, Brigham Young University, and the San Francisco Bay Area Air Quality Management District, provided their raw data sets to the HEI investigation team for reanalysis. HEI's reanalysis produced numerical results from the

data sets for all six locations that closely agree with and, in general, confirm those of the original investigators.

These studies have been subjected to an appropriate peer review process when they were published in reputable scientific journals. Given the consistency and coherence of the scientific evidence and the scrutiny the studies have received in peer review and in the extensive scientific review process described above, EPA does not believe that review of the raw data underlying these studies is necessary. Nevertheless, in the interest of facilitating broad public understanding in the rulemaking process, on January 31, 1997, I instructed my staff to write to the principal investigators of the studies in question and urge them to make the data underlying their studies available to interested parties.

As described to us in a recent letter, Harvard has asked the HEI to establish a process for reviewing the data in the Six Cities Study. While EPA believes that, as a general principle, data underlying these and other studies should be made available, the Agency respects the fact that revealing underlying data can raise significant proprietary, legal and ethical issues concerning confidentiality. Many of these studies use highly personal information, including medical data, which were obtained through promises of confidentiality. Data-sharing arrangements must, therefore, appropriately accommodate interests both in making data accessible to interested scientists and in protecting the confidentiality and proprietary nature of the information contained within them. It appears that the approach being pursued by Harvard with HEI appropriately accommodates these interests. Similarly, the American Cancer Society, which

maintains the extensive data underlying the largest of these epidemiological studies, also has an appropriate protocol for public access by qualified researchers.

Costs and Benefits Associated with National Ambient Air Quality Standards and EPA's Regulatory Impact Analysis

Throughout the 25-year history of the Clean Air Act, national ambient air quality standards have been established based on an assessment of the science concerning the effects of air pollution on public health and welfare. Costs of meeting the standards and related factors have never been considered in setting the national ambient air quality standards themselves. As you can see from the description of the process I went through to choose proposed levels on ozone and particulate matter, the focus has been entirely on health, risk, exposure and damage to the environment.

I continue to believe that this is entirely appropriate. Sensitive populations like children, the elderly and asthmatics deserve to be protected from the harmful effects of air pollution. And the American public deserves to know whether the air in its cities and counties is unsafe or not; that question should never be confused with the separate issues of how long it may take or how much it may cost to reduce pollution to safe levels. Indeed, to allow costs and related factors to influence the determination of what levels protect public health would be to mislead the American public in a very fundamental way.

While cost-benefit analysis is a tool that can be helpful in developing strategies to implement our Nation's air quality standards, we believe it is inappropriate for use to set the standards themselves. In many cases in the past, cost-benefit analysis has

overstated costs. Many kinds of benefits are virtually impossible to quantify -- how do we put a dollar value on reductions in a child's lung function or the premature aging of lungs or increased susceptibility to respiratory infection? Very often we cannot set a value and these types of health benefits are, in effect, counted as zero. At the same time, both EPA and industry have historically tended to overstate costs of air pollution control programs. In many cases, industry finds cheaper, more innovative ways of controlling air emissions than could be anticipated by EPA. For example, during the 1990 debates on the Clean Air Act's acid rain program, industry initially projected the costs of an emission allowance (the authorization to emit one ton of sulfur dioxide) to be approximately $1,500, while EPA projected those same costs to be $450 to $600. Today those allowances are selling for approximately $100.

Another example involves EPA's regulations in the 1970's and 1980's to reduce emissions of smog-forming volatile organic compounds from coating and printing operations. Industry developed powder coatings and ultraviolet light-cured coatings that not only reduced emissions to the EPA-required levels, but for these uses essentially eliminated emissions altogether. In addition to saving industry the high cost of equipment for the collection and destruction of volatile organic compounds, these coatings provide for faster production, improved efficiency, reduction in energy costs and frequently improved performance. The coating industry has since developed new export markets. The combination of the Clean Air Act and the European goal of zero emissions of volatile organic compounds is driving the industry to develop new techniques. Although the coating industry as a whole predicts growth of two to three

percent, the powder and UV-cured coatings are growing much faster to meet the needs of customers to reduce emissions of volatile organic compounds.

On the other hand, the Clean Air Act has always allowed EPA and the states to consider costs and feasibility of meeting standards in devising attainment strategies, and in setting deadlines for cities and counties to comply with air quality standards. This is certainly the case for any revision we might make to either the ozone or the particulate matter standards. This process has worked well. In fact, our preliminary studies indicate that from 1970 to 1990 implementation of the Act's requirements has resulted in significant monetizable benefits many times the costs for that same period.

Finding Common-Sense, Cost-Effective Strategies for Implementing a Revised Ozone or PM Standard

If we ultimately determine that protection of public health requires the revision of one or both of these standards, the Clean Air Act gives us the responsibility to devise new strategies and deadlines for attaining the revised standards. In doing so, we are determined to develop the most cost-effective, innovative strategies for state implementation, and to ensure a smooth transition from current efforts.

To meet this goal, we have used the Federal Advisory Committee Act (FACA) to establish a Subcommittee for Ozone, Particulate Matter and Regional Haze Implementation Programs. It is composed of almost sixty members of state and local agencies, industry, small business, environmental groups, other federal agencies and other groups and includes five working groups comprised of another 100 or so members of these same kinds of organizations.

The Subcommittee and the various workgroups have been meeting regularly for well over a year to hammer out innovative strategies for EPA and the states to consider in implementing any revised standards. Members from industry, state governments and others are putting forward position papers advocating innovative ways to meet air quality standards. It is our belief that results from this Subcommittee process will lead to innovative approaches for implementing any new standards. The Subcommittee will continue to meet over the next year to help develop cost-effective, common-sense implementation programs.

The issues being addressed by the Subcommittee include:

- What will be the new deadlines for meeting any new standards? [If EPA tightens a standard, it has the authority to establish deadlines of up to ten years -- with the possibility of two additional one-year extensions -- beyond the date an area is designated "nonattainment."]
- What will be the size of the area considered "nonattainment?" [If it revises an air quality standard, EPA has the ability to change the size of the affected nonattainment areas and focus control efforts on those areas that are causing the pollution problems, not just the downwind areas that are monitoring unhealthy air.]
- How do we address the problem of the pollutants that form ozone and/or fine particles being transported hundreds of miles and contributing to nonattainment problems in downwind areas?

- What kinds of control strategies are appropriate for various nonattainment areas? Can we use the experience of the past several years to help states target those control strategies that are the most cost-effective?
- How can we promote innovative, market-based air pollution control strategies?

The implementation of these new standards is likely to focus on sources like cars, trucks, buses, power plants and cleaner fuels. In some areas, as with the current standards, our analysis shows that reaching the standards will present substantial challenges. All of the air pollution control programs we are pursuing to meet the current ozone and particulate matter standards, as well as programs to implement other sections of the Clean Air Act, will help meet any revised standards. For example, the sulfur dioxide reductions achieved by the acid rain program will help greatly reduce levels of fine particles, particularly in the eastern United States. Cleaner technology in power plants would also greatly reduce the nitrogen oxides that help form ozone across the eastern United States.

Response to Small Business Concerns

In announcing the proposed ozone and particulate matter standards last November, I initiated steps to further expand the membership of the Federal Advisory Subcommittee to include more representation from small business and local governments.

We are also following Small Business Regulatory Enforcement Fairness Act (SBREFA) procedures to conduct small-business panels for collecting advice and

recommendations on how states could lessen the impacts on small business and other small entities as the states develop their implementation plans. While I have concluded that SBREFA did not require such panels for the national ambient air quality standards rulemakings because those rulemakings, if promulgated, would not establish direct requirements on small entities, we believe that the panels, and the related FACA activities, will prove very useful in helping us develop guidance and other materials to help and encourage the states to minimize small-business impacts. We are currently considering recommending to the states a number of mitigating measures, such as small-business exemptions, longer compliance schedules, and flexible approaches such as emissions trading. We expect to get more good ideas from small-business representatives as the panel process and FACA meetings proceed. In short, we are taking seriously small business concerns as we look toward implementation of any new or revised standards.

I intend to announce our proposals on implementation of the proposed new standards in phases that correspond to the Federal Advisory Committee Act Subcommittee's schedule for deliberating on various aspects of the program. I have previously stated my intention to propose the first phase of that program at the same time that I announce our final decision on revisions to the ozone and particulate matter standards.

Conclusions

Mr. Chairman, the issues we are discussing today are critical to the state of the Nation's public health and environment. It is imperative that the American public understand these important issues. I am hopeful that this and other hearings and public forums will help focus the national debate on the real health and environmental policy implications of these national air quality standards.

In the Clean Air Act, the Congress has given me the responsibility to review every five years the most recent science to determine whether revisions to national air quality standards are warranted. In doing so, the law tells me to protect the public health with an adequate margin of safety.

We are constantly reviewing the science associated with these standards, but we do not often propose revisions to them. I have done so in the case of ozone and particulate matter because of significant new scientific evidence. For the past three and a half years we have targeted our resources to conduct a thorough, intensive review of this scientific evidence. The scope and depth of this review process has been based on virtually unprecedented external peer review activities.

Given the sensitive populations affected by these pollutants -- children, asthmatics, the elderly -- as well as possible effects on outdoor workers and other healthy adults, I determined that it was appropriate to propose standards that tended to fall toward the lower end of the range of protection supported by our independent science advisors and recommended by experts in my technical offices. Based on the record before the Agency at the time of proposal, including the advice and

recommendations of the CASAC panels, it was my view -- subject to further consideration based on public comments -- that the proposed standards were requisite to protect public health, including sensitive populations, with an adequate margin of safety.

At the same time, I recognize that the proposed standards involve issues of great complexity and we are currently reviewing a broad range of comments from affected and interested parties. As I have described, we have gone to unprecedented lengths to provide the public with opportunities to express their views on the proposed standards. We also expressly requested comments on options (including alternative levels and forms of the standards) that are both more protective and less protective than the levels we proposed. We intend to give serious consideration to these comments.

Mr. Chairman, this concludes my written statement. I will be happy to answer any questions that you might have.

Mr. MCINTOSH. Thank you very much, Administrator Browner.

Now, I think all of us agree that we wanted to have the best public policy and the process should lead to that. But the process is also designed to ensure that all participants and all Americans have certain rights to have their views considered.

One of the key changes that Congress made last year in the regulatory process and in the Clean Air Act effectively was the Regulatory Flexibility Act and the Small Business Regulatory Enforcement and Fairness Act, sometimes referred to as SBREFA.

It is my understanding that in the Federal Register notice that EPA published on December 13th, they indicate that they do not believe the proposed air quality standards are subject to those requirements since the standards, in and of themselves, do not require small entities to comply with any rulemaking.

In other words, the Agency seems to argue that State regulations implementing the quality standards might establish requirements applicable to small entities, but the standard itself would not.

One of my colleagues, Mr. Snowbarger, pointed out to me the other day this is somewhat like saying that although the IRS issues regulations, and we are all required to file tax returns, we are not really affected until we start making money. I think all of us realize the absurdity of that type of logic.

Now, in a letter dated November 18, 1996, the Clinton administration Small Business Administration—and I would like to submit the letter to the record—wrote to you, Jere Glover, who is the chief counsel for advocacy, pointed out in this letter, on page 2, that SBREFA does apply to this rulemaking.

How can you say that EPA could not conduct a regulatory flexibility analysis when your own administration's Small Business Administration says you can and you must?

Ms. BROWNER. Obviously, within an administration, each individual agency and department has a responsibility to review the laws, to review Executive orders, to review guidances, and make an appropriate determination from their perspective.

There is an OMB process—and I know Ms. Sally Katzen will be testifying later as to that process—where, appropriately, these kind of issues are raised and discussed.

At the conclusion of that process, it was the judgment of the Office of Management and Budget to clear EPA's proposed rule for public comment, and that is where we now find ourselves in the process, taking extensive public comment and analyzing that public comment.

Mr. MCINTOSH. In spite of the serious risk that by not following the legal advice of the controlling agency, the Small Business Administration, that if the rulemaking went forward without that impact analysis on small business and small towns, that it would be subject to a challenge in court?

Ms. BROWNER. We don't doubt that there will be lots of people, some from industry and other places, who will no doubt challenge whatever decision we ultimately make, whether that is a decision to retain the current standards or to strengthen the current standards to provide additional public health protections. I don't doubt this will find itself in court, as do many of the decisions I make on behalf of the American people and their health protection.

Mr. MCINTOSH. By not following this new process, I am very worried that that will exacerbate that problem and further delay efforts to clean the air.

Now, one way EPA could ensure that the Small Business Regulatory Enforcement Act is not a problem would be to exempt small entities from the implementing control measures in its standards. Now, are you prepared to commit to that type of exemption?

Ms. BROWNER. If I might just step back for a moment, Mr. Chairman, this is obviously an important area. If I might explain to the members of the committee, I know you are intimately familiar with these statutes, but perhaps for the other Members, if I might just explain what the various components of the law direct EPA to do, perhaps that would be helpful.

Mr. MCINTOSH. Certainly. I didn't hear an answer to my question.

Ms. BROWNER. I wanted to explain, and then people could perhaps understand why, as it is frequently the case when you deal with complex issues, they don't lend themselves to yes and no answers. I am more than happy to explain what the law says.

Mr. MCINTOSH. Go ahead and explain the law. But I would like an answer. Go ahead with your explanation.

Ms. BROWNER. The Regulatory Flexibility Act, which has been on the books, I think, since 1980, says that a review of options must be undertaken by an agency in adopting a particular regulation unless no significant economic impact on a substantial number of small entities occurs.

What we are doing and taking comment on right now and considering—and, again, we have not made a final decision—is whether or not, under the public health provisions of the Clean Air Act, the national ambient air quality standards for ozone and fine particles should be changed. When that decision is ultimately made——

Mr. MCINTOSH. When the decisions are made——

Ms. BROWNER. We haven't made any decisions.

Mr. MCINTOSH. No; in the past when EPA made similar decisions, didn't they conduct a Regulatory Flexibility Act analysis?

Ms. BROWNER. Not within the prescriptions of the 1980 act, no. There are analyses that are done.

Mr. MCINTOSH. My understanding is, they did, and they included it in part of the rulemaking record.

Ms. BROWNER. No. If I might, please, explain what the Clean Air Act says, I think it could be helpful.

Mr. MCINTOSH. Certainly.

Ms. BROWNER. Thank you. The Clean Air Act, since its original passage, has required EPA to review six public health air standards every 5 years. That is the section of the act, section 109, which we are now engaged in and we seek public comment on.

When a final decision is made, if that final decision is to change the current standards to strengthen the public health protections, there then will flow a very lengthy process whereby each State—not EPA—each State will develop a plan as to how best to reduce pollution in their State.

A final decision on whether or not to change the current public health standards for soot and smog does not, in and of itself, re-

quire any business, small or large, to take any step. That all comes after individual States design individual programs.

That is why this section of the Clean Air Act, we believe, is not subject to the requirements of the Regulatory Flexibility Act. We cannot tell you today what any individual State will decide in terms of industry or business.

Mr. MCINTOSH. I have to tell you, I find that extremely disingenuous, because in your own rulemaking you point out there will be additional areas that will be put into nonattainment and that that automatically requires them to meet standards that are already put into place by EPA. So I think you know there will be businesses affected by that change in status in their communities.

Ms. BROWNER. They will have to plan. There is nothing in the proposal that specifically requires any small business, any large industry, to change what they are doing today. The proposal, and what we take public comment on, is where to protect the public's health.

Mr. MCINTOSH. As I explained earlier, there is nothing in the IRS regulation that requires you to take action until you start making money. But when you start making money, you know you are going to be affected by it. The same thing with these regulations.

My time has expired, but let me just press you, because I do think it is important: Are you prepared to make exemptions for small business in those implementation regulations?

Ms. BROWNER. Mr. Chairman, the implementation is the responsibility of the States through an implementation plan. They will make that decision.

Mr. MCINTOSH. Except you know that EPA issues regulations that limit the States' ability to adopt those plans.

Ms. BROWNER. We do not issue regulations. We will issue guidance. We are in discussions with States, with small businesses, if the standards should be strengthened, as to what those guidances would be, but we do not issue regulations. The individual States decide.

Mr. MCINTOSH. At this point you are not prepared to grant an exemption for small entities?

Ms. BROWNER. Mr. Chairman, if you don't like——

Mr. MCINTOSH. The answer is yes or no?

Ms. BROWNER. No, it is not a yes or no answer because it is not my authority, it is the Governor's authority and if you don't like——

Mr. MCINTOSH. But you are going to issue the guidance. In that guidance, will you give guidance to exempt small businesses and small entities? I think it is clear you are not going to say yes, because you are not prepared to do that.

Ms. BROWNER. No, Mr. Chairman, in the guidance, we can examine all kinds of options in terms of where States may find the most cost-effective ways of reducing pollution. But at the end of the day—and this is extremely clear—it is the Governor who decides in an individual State how best to reduce pollution. And if you don't like that, then the problems are with the Clean Air Act, not with me.

Mr. MCINTOSH. The Governors, and you know, in addition to the regulations and guidance EPA issues, that EPA must sign off on those State implementation plans, and if you adopt the policy that you are not going to approve those State implementation plans, if they exempt small entities, the States are not going to be able to do that.

Ms. BROWNER. That is not our prerogative under the law. It is not our prerogative under the law.

Mr. MCINTOSH. You are telling me that EPA has no sign-off authority for State implementation plans?

Ms. BROWNER. You just said if we adopt guidance saying we won't accept a plan, that doesn't impose reduction requirements on small businesses. That is not our prerogative.

Mr. MCINTOSH. No, no. It is your prerogative to sign off on those State implementation plans.

Ms. BROWNER. The test that we are allowed to apply to a State implementation plan is very simple: Does it, taken in its entirety, achieve the pollution reductions necessary to protect the public's health? That is what it is.

Mr. MCINTOSH. At this point you are not willing to state that you will grant exemptions for small businesses and small entities in applying that standard?

Ms. BROWNER. If a State makes that choice—and I think many will make that choice—we will certainly sign off of it, if their plan guarantees the public health protections that have been promised at the end of this process, if it is our decision to change the current standards.

Mr. MCINTOSH. So basically no, you are not willing to exempt small entities?

Ms. BROWNER. No, Mr. Chairman, I didn't say no, and I wanted the record to reflect I didn't say no. I said very clearly, if the State brings us a plan, it is their choice to exempt small businesses, then we will support that if their plan achieves a level of public health protection.

Mr. MCINTOSH. My time has expired. I appreciate the committee indulging me.

Mr. SANDERS. Mr. Chairman, I would appreciate it if we could have as much time as you had.

Mr. MCINTOSH. Sure. Let's keep going on the 5-minute. If you need more time to pursue a line of questioning, we will be able to grant it to you.

Mr. SANDERS. As they say in basketball, that was a long 5 minutes.

Ms. Browner, we have heard this morning use of the words "sham" and "fraud" to describe the process that you underwent. Those are pretty strong words. But let me ask you a question: I know Mr. McIntosh is concerned you follow the law, and so am I. So my question is the following.

Based on the Clean Air Act today, if the scientific community came to you and said, EPA Administrator, there are some 15,000 people in this country who are dying prematurely, there are some 250,000 people, mostly children, who are suffering from lung problems as a result of air pollution, and, in fact, if you did not act to

protect the health of those people, would you be in violation of the law?

Ms. BROWNER. The law has promised since its inception 27 years ago that the public's health be protected with an adequate margin of safety based on best available science. That is what it has promised, and that is what we are seeking to do at this point.

Mr. SANDERS. Are you suggesting an affirmative to what I am saying?

Ms. BROWNER. Yes.

Mr. SANDERS. In other words, if somebody comes to you and says people are dying all over this country and children are getting sick, and if you did nothing, you would be—as I understand it and read the law, you would be derelict in your duties.

Ms. BROWNER. This is why we have made a proposal to the American people; this is why we are taking comments from the American people on whether or not the current standards for soot and smog should be tightened.

Mr. SANDERS. Very importantly, again, understanding that we have heard this morning the use of the word "fraud" and the use of the word "sham," and I am glad that we have great scientists up here, I myself had trouble getting through biology in college, but it is good we do know we have scientists that know a great deal about ozone and respiratory problems on the committee.

But I would like to ask you, notwithstanding that, have you gotten good scientific advice? Did you pick up these guys in the basement of the EPA building? You sit in a corner and write out rules in order to hurt American industry? Is that what you did?

Ms. BROWNER. No.

Mr. SANDERS. Nor in fact can you defend the scientific work that went into your coming up with your regulations?

Ms. BROWNER. The process envisioned by the Clean Air Act is an inclusive, broad, comprehensive process, and we have done more than adhere to that.

This process has been ongoing in terms of an external scientific peer review panel, the Clean Air Science Advisory Committee, for the better part of 4 years. These are individuals, not EPA scientists; these are individuals from industry, from academic institutions, who have given of their time to review all of the relevant published, peer-reviewed scientific analysis and then provide to us their judgments on where they find the current best available science to be.

Mr. SANDERS. So despite the words "fraud" and "sham," am I correct in understanding that what you are telling us is, you have assembled some of the best scientific minds in the country who know a great deal about this issue, maybe even more than some of us in Congress, and that they have been supportive of your efforts to improve air standards?

Ms. BROWNER. Yes, that is correct. Congressman Sanders, there have never been, for any decision that I am aware of made by the U.S. Government to protect the American people's health, 250 peer-reviewed published studies. That is what we have here, 250 peer-reviewed, published in the leading scientific journals. This is not one or two or three.

This is not EPA scientists doing some work. These are the preeminent scientists in the country engaged in 10, 15, 20 years of scientific study and analysis that has been reviewed by other scientists. It is then published. That is then reviewed again.

Mr. SANDERS. What you are saying is that the work that you have done is based on a broad consensus of the best scientific minds in the country?

Ms. BROWNER. Yes.

Mr. SANDERS. OK. Ms. Browner, Mr. Kanjorski a few moments ago raised an issue of concern, and being from the Northeast, I share his concerns. My constituents in Vermont are breathing the secondhand smoke of big industry in the Midwest, and this is not a minor problem. In fact there is one plant in Ohio that emits more nitrogen oxide, a precursor to ozone, than all of the utility plants in New Jersey, and five times the annual emission of the District of Columbia.

In fact, in 1995, as I understand it, the State of Ohio emitted 2,500 times the nitrogen oxide that my State of Vermont did, and yet we are obliged, as the people in Pennsylvania are obliged, to breathe that pollution. This is a serious problem. How do you propose that we address that problem?

Ms. BROWNER. We and the States recognize there are regional transport issues that, in fact, pollution from one State may have very real public health consequences in another State.

We have been working, as Mr. Kanjorski suggested, through a process involving literally all of the States east of the Mississippi to look at how best to provide a level of protection for all of the people and to look out where we need to get, from the States' perspectives, the greatest amount of reductions to protect not just their citizens but citizens in your State, Pennsylvania, New Hampshire, Vermont, et cetera. There is a process for doing just that, and we are engaged in it right now. It is the Ozone Transport Advisory Group made up of representatives from individual States.

Mr. SANDERS. Let me just conclude my line of questioning by saying I think there appears to be a bit of confusion as to what the law states. My understanding—and correct me if I am wrong, Ms. Browner—is your obligation, by law, is to protect the public health of the American people and that the best scientific minds in America have concluded that there is a very serious health problem, and that is how you have gone through it. Is that correct?

Ms. BROWNER. Right. That is why we have proposed and are taking comment on whether or not to change the current public health standards, because the science, large amounts of it, show that far too many people, particularly our most vulnerable—our seniors, our children—are at risk under the current levels of pollution.

Mr. SANDERS. Second of all, in this particular stage in the process, we are not talking about implementation, so it would be incorrect to be talking about cows wearing diapers and the destruction of all industry in the Midwest and so forth and so on. That is not what we are talking about and not what you are obliged to talk about at this particular point.

Ms. BROWNER. The Clean Air Act, I think very wisely, since its inception has divided the public health considerations and process from the implementation side. And I think equally important to re-

member, the Clean Air Act very wisely invested in the States the responsibility for deciding how, within their boundaries, to reduce their air pollution.

Mr. SANDERS. With a great deal of flexibility?

Ms. BROWNER. With a great deal of flexibility.

Mr. SANDERS. Thank you very much, Mr. Chairman.

Mr. MCINTOSH. Thank you, Mr. Sanders.

Let me turn now to Mr. Snowbarger for 5 minutes of questioning.

Mr. SNOWBARGER. Thank you, Mr. Chairman.

First of all, I find it very confusing, in answer to the chairman's question, that you don't think you are required to file these analyses under the Regulatory Flexibility Act. I am reading from the statute: When an agency promulgates a final rule, after being required by law to publish a general notice of proposed rulemaking, the Agency shall prepare a final regulatory flexibility analysis. And then it goes into what it needs to contain.

So I am a little confused about why you don't think you need to file those analyses.

Let me go to a different matter, though. In some of the information that has come to the committee from EPA, it is my understanding that you have indicated that, first of all, you don't need to comply with these because small business or small entities are not affected by the act.

So kind of out of one side of your mouth, you are saying the agency can't perform the analysis contemplated by the act. Out of the other side of your mouth, though, you are saying through a prepared draft of the regulatory impact analysis to generally inform the public about the potential costs and benefits that may result from its proposed revisions, and you look at the proposed drafts for both particulate matter and for the ozone.

And the charts start talking about small businesses. They talk about how they are going to be affected, and they talk about the fact that small businesses might have an impact of up to 3 percent.

I think a lot of these questions have been raised by the Small Business Advisory Committee through the letter that the chairman introduced into the record.

If you can do an analysis on that basis, doesn't it show that EPA can, in fact, conduct a regulatory flexibility analysis as required by law?

Ms. BROWNER. There are two different issues here—if I might step back. Under the Small Business Regulatory Enforcement Act, SBREFA, there is a provision that allows an agency to certify that there is no significant economic impact on a substantial number of small entities.

Mr. SNOWBARGER. And you made that certification.

Ms. BROWNER. We made that certification. We base that certification on the fact that we cannot, because it falls to the States to write the implementation plans, tell anybody with absolute certainty what might be required of industry. Moreover, in adopting a final public health standard, whatever that might be—and, again, we have not made a final decision. There are no requirements placed on any industry, any small entity, any small business, per se.

A regulatory impact analysis is required under an Executive order signed by the President. The purpose of a regulatory impact analysis is to evaluate broadly both potential benefits and potential costs. We are—and as you make reference to, we have made public a draft regulatory impact analysis; and we will finalize that as we make a final decision on whether or not to tighten the public health standards.

However, it is very important to understand that the Executive order's provisions requiring us to do an RIA, a Regulatory Impact Analysis, does not trump, if you will, the Clean Air Act requirement that this be a decision based on public health and not cost considerations. This whole issue of whether or not the Clean Air Act should require cost to be taken into account in setting public health standards has been debated in this body over the last 27 years.

Mr. SNOWBARGER. I can appreciate all the background information, but I also appreciate the fact I am losing my time and not getting an answer to my question.

You indicated, very early on, we ought to be taking a commonsense approach to all this; and, thus far, I am still looking for it, the common sense, that is.

Let me go to something that seems inconsistent here. You indicated that you certified it didn't affect small business—these proposed regulations didn't affect small business. Why didn't you certify the same thing when you were dealing with the sulfur dioxide proposal in 1996? There was no certification that that did not have an impact on small business.

Ms. BROWNER. Are you referring to an acts consideration?

Mr. SNOWBARGER. Yes. To me, it is a very analogous situation; and yet you have taken totally opposite——

Ms. BROWNER. We didn't propose to change the current standard in that case. We have maintained the existing standard. There is no proposal to change that standard put forward to the American people.

Mr. SNOWBARGER. My understanding is that there was a proposal for change. It did not go into effect. But a reproposal——

Ms. BROWNER. No. We have not changed that standard. That is a fact. The current standard has been in existence now since—for an extended period of time. We did not make a proposal to change that standard.

Mr. SNOWBARGER. My understanding, in 1996, there was a reproposal.

Ms. BROWNER. We are more than happy to look at the document, but we published a notice that we would be maintaining——

Mr. SNOWBARGER. Let me followup on something if I could, Mr. Chairman, real quickly; and I will end my questioning with this.

You stated something that is of a great deal of concern to me. I thought I heard you say—and you can answer both questions at once. I thought I heard you say that the Clean Air Act is not trumped by SBREFA.

Ms. BROWNER. No, I didn't say that. I said by the Executive order requiring a Regulatory Impact Analysis.

Mr. SNOWBARGER. Then give me your legal analysis of which one of the two statutes that I just talked about, the Clean Air Act or

SBREFA or, for that matter, the Regulatory Flexibility Act, which one of those has priority in the EPA.

Ms. BROWNER. The Regulatory Flexibility Act did envision there could be, if you will, a conflict between two statutes and provides for a determination as to whether or not there would be a significant impact on a substantial number of small entities; and we have certified in the proposal that there is not because this is a public health standard. It is not the implementation phase. It is in the public health phase of the Clear Air Act which we have made this proposal and now take public comment on.

Mr. SNOWBARGER. Mr. Chairman, my time is up; but I do have some followup questions for a later time.

Ms. BROWNER. Mr. Chairman, if I might just clarify—and we are more than happy to look at the document that the Member has.

In 1996—on May 22, 1996, we took a final action on sulfur dioxide. It was no revision of the standard. In 1994—in November 1994, there was a reproposal on three alternatives. Perhaps you are referring to a 1994 action, not a 1996 action.

Mr. SNOWBARGER. Answer it for 1994 then.

Ms. BROWNER. We would be more than happy to look at that and work with you.

Mr. SNOWBARGER. Why wasn't there a certification similar—I mean, we are going through a similar process, it seems, than we were in 1994; and there wasn't a certification about the small business at that point.

Mr. MCINTOSH. Maybe we can come back to this after the minority's round of questioning; but I think what the question is going to is the absence of a certification, which, in this case, was given, that it would not apply. But, it is now Mr. Kucinich's time.

Mr. KUCINICH. Thank you very much, Mr. Chairman and Mr. Sanders.

I would like to go back to the Administrator's last discussion with Representative Sanders and, in particular, the science, which seems to be—so much of the debate surrounds this issue of science. Where are all these studies that have been done that support the EPA's proposal? I mean, do you have such studies?

Ms. BROWNER. The proposal that we take comment on is based on 250 peer-reviewed, published scientific studies. We would be more than happy to provide for the record—this is a bibliography of each of those public peer-reviewed studies.

Mr. KUCINICH. Without objection, Mr. Chairman.

Mr. MCINTOSH. We will gladly put that into the record. Thank you.

Ms. BROWNER. We are more than happy to give you all the studies, if that would be further helpful to you. There are boxes.

Mr. MCINTOSH. We may have some questions on that coming up, yes.

Mr. KUCINICH. May I suggest that, since we are in debate over the issue of the science, I am one Member who would like to see some of these boxes so that we can keep this discussion focused on facts and not conjecture. Peer review studies mean something to me, and I would like to have a chance to see them.

Now there have been—of the objections that have been filed to your proposed rules, have you had a similar body of information,

peer review studies published or offered or proffered to the EPA which would categorically dismiss this body of knowledge, the bibliography of which you are submitting for this record?

Ms. BROWNER. No, we have not had another 250 studies submitted suggesting otherwise, in terms of the public health impact.

Maybe I should explain the process a little bit. We have taken public comment, as we do on any proposal. We are reviewing the public comments. We have not completed the review of the public comments. They are quite extensive. We take this process very, very seriously.

It may be that in those comments there are some studies which were completed after the panels concluded their review of existing published science. Obviously, if those are peer-reviewed, published studies, they are important and should be considered in reaching a final judgment; and we would certainly do that.

At this point in time, we know of some, but not any large number. We are determining whether or not they were, in fact, subjected to rigorous scientific peer review, methodology, et cetera.

Mr. KUCINICH. Mr. Chairman, it is a remarkable moment if we can definitively determine that 250 studies which have been presented in support of these proposed rules are, in fact, junk and ought to be cast aside. Because, if that happens, that means that we have thousands of scientists out there who are misinforming the American people about this critical public policy; and if that is happening, certainly the American people have a right to know.

Ms. BROWNER. These are not scientists who work for EPA. These are scientists who have been engaged in these kinds of studies for the better part of their professional careers, in many instances, many work for leading institutions and industry across the country.

You know, this discussion of, quote, junk science, with all due respect, I don't know that it helps the American public engage in an honest consideration of the proposals that we have put before them. There was lots of opportunity while the scientific—Clean Air Scientific Advisory Committee was meeting for anybody from industry or anywhere, academic institutions, to come forward and say, hey, in those 250, guess what, those three are junk. They weren't really peer reviewed. They weren't really published. It didn't happen.

All of these studies were considered, reconsidered and reconsidered; and they are the science—the best available current science that forms the proposal we have made to the American people.

Mr. KUCINICH. On a personal note here, Mr. Chairman, I had the opportunity to go to a pretty good university, Case Western Reserve in Cleveland; and all of us have different backgrounds. Mine are in communication, science. I spent about a year working on a master's thesis, and my whole career depended on how the faculty would judge that thesis. I suppose after the time that I spent, if that was viewed as junk, I would feel pretty bad about it. Not only that, but my career would have been in jeopardy.

Mr. MCINTOSH. If I might interject just very quickly, because I don't want to disparage the scientists who have worked in this area, and I think there are some very good studies out there. But even the best scientists will subject their underlying data to a peer

review; and one of my colleagues, Mr. Sanders, during his time will get into some of the problems we have with that.

So I agree. We have to use good science, but we also have to follow the process the scientists themselves do in examining that underlying data because you can find errors that were not intentional.

Mr. KUCINICH. The Chair is absolutely right. And as someone who respects the process of scientific inquiry, we need to look at that. What I would suggest, that these hearings, as meaningful as they are, can have even more meaning if we have the opportunity to question people about the underlying science so that we can come to a conclusion as to whether or not the EPA's rulemaking is supported by science or driven by some ideological agenda.

I certainly am concerned that the stands that we take here are supported by fact. And when the Administrator presents us with a 250-study bibliography reference, I say that is fine. Can you show us and can you provide us with the extensive information, perhaps a synopsis or a—or a reference which would enable us to have more information so we can make better decisions? Can you do that? With permission of the Chair.

Ms. BROWNER. Absolutely. We are more than happy to give you the studies. That is the peer-reviewed, published studies that were considered.

We might also—this is available, but we would make it available to each of the Members directly, the preamble of the proposed rule, which we take comment on, which speaks to the volume of the science and the scientific process. That might be helpful.

Mr. KUCINICH. I am concluding. Thank you.

I wanted to say to the Chair that I am glad to hear you say that we are not disparaging the scientists who have done this, that we need to get to the underlying premises of their studies. That is very good, Mr. Chairman; and I appreciate that.

Mr. MCINTOSH. What I would propose is we work with Mr. Kucinich and all the Members; and if there are some particular studies we want to take a closer look at, if you have boxes full, rather than you send us a huge box and we look through and pick out the ones that are there, we will try to identify ones for the Agency that we would like to take a closer look at, not only the whole study but the underlying data.

Mr. KUCINICH. I appreciate your willingness to do that, Mr. Chairman. Thank you.

Mr. MCINTOSH. Let me turn now to the vice chairman of the subcommittee, Mr. Sununu.

Mr. SUNUNU. Thank you very much. And I appreciate the remarks that have been made, especially those to make clear that we are not disparaging the work of any particular science, any scientist. In particular, I would emphasize that even the term junk science has not been used by me. It has not been used by any members, even those here that are more critical of some of the processes that may have been used, so I think that——

Mr. SANDERS. If the gentleman would yield briefly, the words fraud and sham have been used.

Mr. SUNUNU. I am referring to the phrase junk science.

Ms. BROWNER. I will amend my remarks—fraud and abuse.

Mr. SUNUNU. I just want to be clear it is not something that has been used on this side.

You talked about 250, the studies, various peer review studies that have been used. Of the 250, how many of those deal with the specific health effects of PM2.5?

Ms. BROWNER. Of the 250 studies, 86 of the studies focus on particles. They focus on——

Mr. SUNUNU. How many focus on the new class, the PM2.5 class, and the specific health effects of PM2.5?

Ms. BROWNER. I think the question—29 look at the fine particles. There are 50-plus cities where fine particles—2.5-sized particles are being measured; and there are health records—the American Cancer Society has health records on individuals in those cities which are now the subject of many of these studies.

Mr. SUNUNU. You are saying 29 studies use PM2.5 data and correlate PM2.5 data to health effects?

Ms. BROWNER. Use fine particle air quality data.

Mr. SUNUNU. Can you provide a list of which of the 29, as you put it, used PM2.5?

Ms. BROWNER. Fine particle.

Mr. SUNUNU. Ten microns is fine, 20 microns is pretty fine to me, but we are talking about the 2.5 micron class, is that correct?

Ms. BROWNER. Or less—or below.

Mr. SUNUNU. Or below. So I just want to clarify, those are the 250 that are dealing with those fine particles, 2.5 microns or less. Twenty-nine, is that the correct number?

Ms. BROWN. Yes.

Mr. SUNUNU. Thank you.

You talked about the CASAC, the Clean Air Scientific Advisory Committee, and their importance in recommending or helping you to decide that these rules are necessary. How many are on that committee?

Ms. BROWNER. There were two panels, one on ozone and one on fine particles. There are 21 participants in the fine particle panel.

Mr. SUNUNU. And their feeling was unanimous that we ought to impose a 2.5 standard?

Ms. BROWNER. Of the 21 members, 19 of that panel said that we should establish—I can read you the quote: There is a consensus that a new PM2.5 max be established with 19 of 21 panel members.

Mr. SUNUNU. And 19 of 21 thought an annual standard was appropriate as well.

Ms. BROWNER. And/or an annual standard, and we can break that out for you in terms of where individuals were.

Mr. SUNUNU. On that basis, how many voted for the annual standard that the EPA proposed?

Ms. BROWNER. Of the 21 members, 19 of 21 said you should do something about 2.5; 11 of the 21 expressed an opinion about what the concentration level of 2.5 should be in terms of an annual or 24-hour standard. Do you want me to keep going?

Mr. SUNUNU. No.

Ms. BROWNER. Not all of them expressed an opinion.

Mr. SUNUNU. Ten didn't express an opinion, and how many were supportive of EPA's proposed standard?

Ms. BROWNER. Six supported levels within the ranges recommended by EPA; five supported levels above that range.

Mr. SUNUNU. And how many didn't support—you are saying 10 supported no range at all.

Ms. BROWNER. No. That is not an accurate reading with what CASAC did; and, with all due respect, if maybe I could explain——

Mr. SUNUNU. Be clear.

Ms. BROWNER. What happened is there were 21 people who spent the better part of 4 years looking at the science in public hearings and other discussions. Of the 21, 19 said it is time to do something about fine particles, 2.5, 19 of 21.

In the scientific community, this is a huge amount of consensus, as I am sure you are well aware. Within those 19, some went on to express a personal opinion about how much of 2.5 may or may not be safe in terms of the public health and the premature deaths, how to measure it.

Mr. SUNUNU. How many——

Ms. BROWNER. And the fact that 10 didn't say anything doesn't mean they oppose. Remember, 19 said it is time to do something about 2.5.

Mr. SUNUNU. How many voted for the EPA standard?

Ms. BROWNER. They were never asked to vote for a specific standard.

Mr. SUNUNU. They were never asked to vote for a specific annual standard?

Ms. BROWNER. That is not the way the process worked. It is not a vote in the way the committee takes a vote.

Mr. SUNUNU. We are here to find out what the process is, and that is important.

Let me ask one final question, and that relates to what Mr. Kucinich raised. You will make the underlying data of the PM2.5 studies available to this committee.

Ms. BROWNER. I am more than—I think it would be helpful if we could step back for a moment and discuss the scientific process.

Mr. SUNUNU. Because my time has expired, let me just ask one clear, specific question.

I know Chairman Bliley of the Commerce Committee has requested the underlying data, there has also been a Freedom of Information Act filed for the underlying data, and I would just ask that you, if you could, personally provide us with the underlying data.

Ms. BROWNER. All of the data we have will be made available. We have worked hard with the committees to make it available.

Mr. SUNUNU. But you have——

Ms. BROWNER. I am more than happy to explain the situation.

Mr. SUNUNU. Do you have any other underlying data?

Ms. BROWNER. There are on the order of 300,000 individual health diaries and medical records, some of which are at the American Cancer Society, some of which are at Harvard. These are individuals who volunteer to be part of scientific studies. This is very important to the scientific process. Information is kept about—including such things as their reproductive history, et cetera.

I am trying to explain this. It is not simple.

Mr. SUNUNU. I think that, absolutely, the rights of those individuals' privacy can and should be respected; but I also would hope that they will—are willing to—the finders are willing to provide the underlying data to you and to this committee.

Ms. BROWNER. We do not have the personal health records either from the American Cancer Society or from Harvard. The American Cancer Society has a long-standing policy that a qualified scientist, with a legitimate, scientific research agenda, can access those individual health diaries and medical records.

Harvard has indicated that they are willing, through an independent group, HEI, to have a similar process allowing a qualified scientist with a legitimate scientific question to access those private—for which there are confidentiality agreements, medical diaries and medical records.

Mr. SUNUNU. Have all the underlying data then been provided to HEI?

Ms. BROWNER. Harvard is in discussions with an independent group, HEI, to have HEI facilitate a qualified scientist with a legitimate scientific——

Let me say something. The American Cancer Society has had this in writing, a protocol about how you do it. To the best of our knowledge, there has not been a request—and you can check with the American Cancer Society. We don't want to speak for them, absolutely.

Obviously, there has not been a request from anyone in the last 6 or 7 months to access their individual health diaries and medical records. It is there—you can go, I think it is to Atlanta if you are a scientist; and you can get this information.

Obviously, I think we all agree it's important people be willing to participate in scientific studies; and confidentiality, when it relates to people's health records is important; but there is a process; and it is one that is sanctioned by the scientific community at large.

Mr. MCINTOSH. I appreciate the gentleman's comment.

Mr. SUNUNU. Thank you very much, and I appreciate the minority for allowing me liberty with the time.

Mr. MCINTOSH. I appreciate that.

I will say that we will come back to this. Because it is my understanding that the chairman—the then chairman of the Clean Air Scientific Advisory Committee was denied access to that underlying data; and as a scientist, I think there are a series of problems.

Ms. BROWNER. Mr. Chairman, if I might respond to that statement.

Mr. MCINTOSH. Certainly. Is that inaccurate?

Ms. BROWNER. If Ms. Nichols might explain precisely, because I think it is important.

Mr. MCINTOSH. Do you want me to come back to it?

Mr. SANDERS. No, continue. Into the mic, please.

Ms. NICHOLS. There was a letter sent by the Chair of the committee and another member of the committee to Harvard, specifically asking them to make their data more widely available. These are the diaries, again, that the Administrator was speaking about. And there was correspondence back on that.

A process was used at that point to have some independent review of the Harvard data. Based on that, the Clean Air Scientific Advisory Committee voted to use the study in their final report. That is, they didn't have any further discussion on that issue. They apparently were satisfied that their requests had been——

Mr. MCINTOSH. But the chairman was denied access to that underlying data.

Ms. NICHOLS. No, there is no record we have that he was denied access to that.

Mr. MCINTOSH. We will come back to this. Because I do have an example of a staff member in Congress being denied access to it, and I understand that these were paid with taxpayer funds in part.

Ms. BROWNER. Well, I am more than happy to respond to that, Mr. Chairman. That is fine. We can wait.

Mr. SANDERS. Go ahead. I think it is important.

Mr. MCINTOSH. Specifically, Ms. Browner, you were in front of the Appropriations Subcommittee on this and told them it was to be available, gave them a number; and they had a staff member call; and they were denied access to it.

Ms. BROWNER. There is a process for a qualified scientist—these are, again, individual personal health records with confidentiality agreements on each and every one of them.

You know, the question—if I might step back very quickly. First of all, EPA did not fund Harvard to collect the individual health records. We did not pay for those individual health records to be collected. I think that is one point that I think needs to be clarified.

Mr. MCINTOSH. They did have a process for studying that.

Ms. BROWNER. There were studies and analyses which were funded in part by EPA. Every single study in the bibliography which we present to you—every single study that shapes the proposal did not make a final decision—that shapes the proposal in terms of public health protections we have made to the American people, was peer reviewed, including the very study you, I think, raised questions about. It was peer reviewed.

And Dr. Wolf—I think Dr. Lipman—I'm sorry, not Dr. Lipman, Dr. Wolf, as the chairman of the panel, agreed at the end of the day that that Harvard study should be properly included in the 250 studies that then shape their advice to EPA. So this is a subject that has been, I think, considered, many, many times; and we are more than happy——

Mr. MCINTOSH. Let's move on.

But, since that time, EPA itself has had to make a correction itself on some of its public statements about the effects—the magnitude of the effects of the problem; and there are serious questions that have been raised about that study, in particular, because it is being used to base certain assertions.

And I guess I think I agree—and strongly agree—with Representative Kucinich. We need to get to the bottom of it. And I think in this case it means getting to some form of the underlying data. If you strip out the personal information that are not related to the conclusions being drawn, there needs to be some way in which the agency obtains it and, frankly, at this point submits it to Congress.

Ms. BROWNER. We have encouraged Harvard in numerous letters—I think you are aware of the letters——

Mr. MCINTOSH. Are you willing to establish a policy that you won't give them further grants until they comply?

Ms. BROWNER. I think that would be up to Congress. Our grants are competitively awarded. If you want to tell us not to provide——

Mr. MCINTOSH. You have got a lot of discretion——

Ms. BROWNER. No, I don't. They are competitive. In fact, I don't even know who gets a grant from EPA. If you want to direct us to never give Harvard another scientific research grant, that is your choice.

Mr. MCINTOSH. And you would agree with us in that?

Ms. BROWNER. It would be your choice, Mr. Chairman.

Mr. MCINTOSH. But I don't hear an objection.

Ms. BROWNER. I think Harvard does some of the most impressive scientific work in the United States, and we have, I think, followed appropriate scientific process, and we will continue to do so.

Mr. MCINTOSH. Let me continue. I believe it is Representative Kanjorski who is next for 5 minutes.

Mr. KANJORSKI. Thank you very much, Mr. Chairman.

Ms. Browner, let me get some understanding of what is happening here. As I understand, the scientific data has indicated that the particulates in the air in some areas of the country must be reduced in order to provide for a measure of health for children and average Americans.

Now when that is arrived at, you talk about the fact that then it is the responsibility of the individual States to come up with a program, and you provide guidelines to those States. Do you also have the authority for final approval of what those States will do? Or are they able to go out, once they show they will comport with reductions, they can do anything they will?

Ms. BROWNER. Our review focuses on one issue, and one issue only, which is, does their plan achieve the reductions necessary to meet the public health?

Mr. KANJORSKI. When you talk about the public health, is it within their jurisdiction or the public health throughout the United States?

Ms. BROWNER. Obviously—and I appreciate your concern on the transport issues and what may be happening to the people in your State and their health because of pollution in another State—we have the ability—we do have the ability in reviewing an individual State plan to take into account what its effects may be on another State. That is a simplification; it is a more complicated process. We have been involved in a process for a number of years now with the States on this matter.

Mr. KANJORSKI. If I were the Governor of Indiana or the Governor of Ohio, I would just have all my smokestacks enlarged 200 feet, so the particulates would go higher into the atmosphere and carry further over into Pennsylvania, and I would meet all my conditions, so I can continue encouraging industry to come into my State, but the particulates in the State they land in would be materially negatively impacted.

Ms. BROWNER. If we can demonstrate that one State is being adversely affected, the health of the people in the State is being ad-

versely affected by another State, the Clean Air Act does provide some authorities to us to address that situation. I want to be honest with you; it is a long, complicated process.

Mr. KANJORSKI. And I understand that. And what I am worried about, and I am wondering whether or not we should be attacking this problem rather than State by State, whether we should look at a regional attack on this problem or even a national attack on this problem.

The political ramifications of the chief executive of the State finding the cheapest, most effective way to solve the problem for his State's economy, as opposed to taking into consideration the national interest, or the national good, is overwhelming. And not to put down the chairman's State of Indiana——

Mr. MCINTOSH. I was going to say, I don't think the EPA would let them get away with simply extending the smokestack.

Mr. KANJORSKI. I mean, clearly we are aware in western Pennsylvania.

Interesting anomaly: You received a letter from one of my colleagues, Mr. Klink, that an auto industry was to locate in western Pennsylvania because of the nonattainment status that potentially that area would have. They decided to locate in another State, the State of Ohio, which is interesting, since the State of Ohio is particular for coming into Pennsylvania and making us not attain the State, they are getting our industry, and it seems to me grossly unfair for that to happen.

It is obviously not an easy decision, and, obviously, air isn't Pennsylvania air or Ohio air, it is American air, or the world, if we will. And I am just wondering whether or not, looking at the States and looking at the standards the way we are, we shouldn't go back and really look at the act and say, where does this particulate matter really occur in its worst conditions, and how could they be best cleaned up as opposed to spreading sometimes the cost into areas such as Pennsylvania?

There is very little we can do. Whatever we do expense-wise, we don't end up cleaning or making our area more an attainment area because we are already a nonattainment area at our borders.

Ms. BROWNER. Certainly the transport issue is one of the most difficult that we face as a country, and I think that all of you, whether you be Democrats or Republicans, your Governors be Democrats or Republicans, should be quite pleased that we have every State east of the Mississippi, for all intents and purposes, engaged in a very complicated set of modeling and discussion about how to deal with the transport issue.

There is recognition on the part of the vast majority of States that it has to be viewed from a regional perspective, that you cannot simply hope to deal with it State by State.

If we conclude the current process by strengthening the public health protections for soot and ozone, it will allow for some more aggressive perhaps actions on transport; it will give you some additional mechanisms for addressing transport.

The other thing I think is very important to understand about transport, and I think you have all but said this, but let me reiterate because it is so important: The transport problem is not a problem of small business, it is by and large a problem of large

power plants and large industry, and it is by and large the lion's share of the problem when we look at current levels of pollution and we look at what areas might not, should we decide to tighten the public health standards, be able to immediately meet a tougher public health standard.

Mr. KANJORSKI. Mr. Chairman, I don't know if my time has expired. I wanted to ask a question.

Mr. MCINTOSH. We have been very lenient with the clock. Why don't you go ahead.

Mr. KANJORSKI. Ms. Browner, you mentioned all the standards are set out for the public health, and I am not sure whether you are defining public health as having a very limited way, physical health. Sometimes the well-being, the economic well-being, that people determine what their real health is, people who can't get jobs or can't have a quality of life or quality of job as a result of the limitations that may occur here, I think there is, in fact, an impact on public health.

What I would urge is that if we could find ways, if there need to be adjustments in the law or even, above and beyond that, that public policy in other areas of the Federal Government be adjusted to take into consideration the negative impacts of the environmental standards that may be imposed, this could be very important, and that is to say that as clean jobs locate in other areas of the United States, maybe a tax process be put into place to allow more competitiveness for those clean jobs to be in impacted areas such as the northeastern United States, so at least we can find an even playing field for quality and quantity of jobs in these areas.

Ms. BROWNER. Certainly.

Mr. MCINTOSH. Thank you very much, Mr. Kanjorski.

Let me now turn to Mr. Barr for 5 minutes.

Mr. BARR. Thank you, Mr. Chairman.

Mr. Chairman, this has indeed, contrary to my expectations, been a very enlightening hearing. We discovered some new legal authorities to add to those we have heard recently from others in this administration. We now know that each agency decides for itself whether or not it has to follow a Federal law. That was in response to a question that the chairman asked.

We also now know that even though an institution conducts a study funded by the taxpayers of this country, which forms the basis for eventual rules and regulations to be implemented that will cost those same taxpayers many billions of dollars, that the taxpayers have no right and that the Government, or at least this administration, will not fight for their right to see that evidence and review that data. That certainly is disappointing; enlightening, but certainly disappointing.

Some things that have not yet been said, Mr. Chairman, that I think are important for the record also: That is, some of this material is contained in an article written by our distinguished colleague, Representative Tom Bliley, in a special section on environment printed in the Monday, April 21st edition of Roll Call, and that it details the very serious problems because of the cost, for example, and the way these rules and standards are being implemented—attempted to be implemented, by EPA are wrong.

Mr. Chairman, you are not alone, as I suspect you know, in your review of this procedure as being entirely inappropriate. As a matter of fact, OIRA, the Federal Department of Transportation, the Small Business Administration, the President's Council of Economic Advisors, the Department of Agriculture, the Office of Science and Technology Policy, unlike the administrator before us today, are willing to admit and understand the reality of the situation, and that is, what the EPA is proposing to do will have very real consequences and very expensive consequences, and therefore they, I dare say, and I suspect agree with you, Mr. Chairman, that the process so far has not been one that is in the public interest and ought to be followed—ought not to be followed.

Mr. Chairman, I have a copy of a court document here, before the Environmental Protection Agency by the Washington Legal Foundation dated, I believe, March 12 of this year, a petition by that foundation to disqualify Administrator Browner from further participation in the rulemaking proceeding, et cetera.

Attached to that is a letter that I referred to earlier raising very serious concerns with the Administrator by Senators Glenn, Ford, Byrd, Rockefeller, and Robb.

Ms. Browner, have you read this petition?

Ms. BROWNER. If you are referring to—it is not a petition filed in a legal court, I think it is an administrative petition. If that is what you are referring to, I am familiar with it, yes.

Mr. BARR. Have you read it?

Ms. BROWNER. I have read portions of it, yes.

Mr. BARR. OK. Then you should certainly be familiar with the quotes that I would presume are not inaccurate about how you trumpet that you will not be swayed by opposing views with regard to EPA's proposed provisions, et cetera. Are you familiar with their quotes that they contain in this petition?

Ms. BROWNER. My review of the quotes has led me to conclude that they are taken out of context, to say the least.

Mr. BARR. That is what I would expect you to say.

Ms. BROWNER. I would be more than happy to provide the speeches from which they are taken.

Mr. BARR. I have seen them.

Ms. Browner, it appears to me from your public statements regarding these procedures that your mind is, in fact, closed to questions about the validity of the science.

There are other quotes, and I also presume that these are accurate, although you may maintain that all of your quotes are taken out of context. I refer specifically to your comments before the Senate Environment and Public Works Committee in February, February 12 of this year, that indicate, I think very clearly, that you have indeed made up your mind, and if you have, I don't know why you are afraid to say so.

On page 7 of the transcript, you are quoted as saying, "in a most compelling way the science leads us to the new stronger standards;" on page 9, that, quote: "The best available evidence has determined that PM2.5 is damaging to human health;" on page 9 also, quote: "The best current peer-reviewed fully debated scientific conclusions are that too many Americans are not being protected by the current standards for these pollutants;" page 10, quote:

"Science now tells us that our air pollution standards are not adequate to protect our health."

It is very interesting to compare that to other statements by EPA and by others in this administration, that great strides have been made and that they are largely adequate.

On page 28, quote: "What the science now shows us is, far too many people under current levels of pollution are experiencing aggravated asthma;" on page 30, quote: "Our requirement is to make sure that if keeping any air quality standards the same is adequately protecting the public's health, what we found in most instances is, yes, in two instances, PM2.5, and ozone, we found no."

I think that looking at all of these and the others that are contained in the petition indicate that your mind is made up and that these procedures that purportedly are going on really have little meaning in light of what EPA has already determined it wants to do. But I certainly appreciate hearing from you, to have your thoughts.

Ms. BROWNER. No. 1, my mind is not made up. I take the public comment very seriously. I would suggest to you as evidence of that the fact that, based on public comment, we have already made adjustments and analysis. We take it absolutely positively seriously, as I have done in every single effort I have engaged in, in terms of public health and environmental protections over the last 4 years.

We have concluded a comment period, and we are vigorously reviewing and understanding all of the comments we have received. There is no final decision at this time. That will not happen until later in the year. I do believe——

Mr. BARR. By when?

Ms. BROWNER. We have indicated in a court that we will make a final decision in the case of fine particles no later than July 19th, which is a Saturday, it has to be published, so that backs it up to July 4th.

We have similarly indicated to the public, not in a court of law, directly—well, we did actually do it directly too—that we would conclude our review of ozone in the mid part of this year, and that is what we have committed ourselves to doing.

A second point—so, No. 1, there is no final decision. That will be forthcoming, and it will be in keeping with the public comment process.

Mr. BARR. Maybe you could then just enlighten us: When you said you would not be swayed, you will not be swayed by anything?

Ms. BROWNER. I was, in that particular instance, referring to protecting our children. I believe that part of my job as the head of the country's environmental agency is to protect the most vulnerable among us, not the least of which are our children.

I might add, Congressman Barr, I do think—and maybe perhaps here we have a disagreement, but I do believe that part of my job as head of the EPA is to speak out to the American people.

Mr. BARR. Is it also to follow the laws of this land?

Ms. BROWNER. I have abided, absolutely, positively, by the laws of this land.

Mr. BARR. According to your lawyers.

Mr. MCINTOSH. The time of the gentleman has expired. I can yield you some more, but I want to give the Administrator a chance to make a response.

Ms. BROWNER. The quote specifically says when it comes to protecting our children, I do believe that——

Mr. BARR. That is in your quote, but that is only the very first part of it, isn't it?

Ms. BROWNER. I will read it to you.

Mr. SANDERS. I would like for her to read it.

Ms. BROWNER. "When it comes to protecting our children, I will not be swayed." That is what I said, and I stand by that statement. My job as the head of country's environmental agency is to protect——

Mr. BARR. Read the whole quote.

Ms. BROWNER. Mr. Barr, can I please have my moment?

Mr. BARR. Read the whole quote.

Ms. BROWNER. I will read the whole speech.

Mr. BARR. No; read the whole quote, because twice you repeat, you trumpet, that you will not be swayed. Read the whole quote there.

Ms. BROWNER. "If the science shows me"—excuse me—"if the science shows that we have to do more to ensure that our kids are safe from pollution, then that is precisely what we will do." That is what the law tells me to do, and I am abiding by the law.

Mr. SANDERS. Does the gentleman from Georgia have a problem with that statement?

Mr. BARR. I want her to read the whole quote.

Would you like me to read the rest of it?

Ms. BROWNER. "And if someone wants to accuse me of doing too much and acting too forcefully to protect the health and future of our children, then so be it, I will not be swayed," and I stand by that statement. It is not a violation of any law.

Mr. BARR. I am sure you do.

Ms. BROWNER. If I may respond to the other allegations made against me?

Mr. MCINTOSH. Ms. Browner, if I may ask one question, I think we will clear this up. You are telling us today there are more options than that which has been proposed as the preferred option which would allow you to protect children's health?

Ms. BROWNER. As is always the case in a public notice and comment, we solicit opinions on a variety of points of view. We do, as is frequently the case, tell the American people, in an effort to be honest, where our current judgment finds us. That is all we have done here. It does not in any way say we have made a final decision.

But, Mr. Chairman——

Mr. MCINTOSH. Let me make sure, because I think we can clear this up in a way that will be satisfactory to you. You are telling us today that your mind is open, that there are more than just the alternative that has been proposed as the preferred alternative as possible ways to protect the health of children, as regards to ambient air quality standards.

Ms. BROWNER. I am telling you two things. One, I have not made a final decision. I think the notice and comment portion of any

rulemaking is absolutely essential, and I will thoroughly review and understand that before I make a final decision.

In making a final decision, I believe the Clean Air Act public health provisions do require me to take into account the health of our children. I do believe that.

Mr. MCINTOSH. You have an open mind as to possible ways in which that can be done.

Ms. BROWNER. I will, at the end of the day, set a public health standard, as the Clean Air Act directs me to do, based on protecting all Americans, most particularly our children. I do not today say to you with absolute certainty what that will be.

Mr. MCINTOSH. But I think it is pretty important, because Representative Barr has raised a legitimate question on the integrity of the process, and I am troubled, if you can't give me a yes or no answer, do you have an open mind that there are more than one alternative to achieving that result?

Ms. BROWNER. I haven't made a final decision as to what the national ambient air quality standard should be for ozone or fine particles.

Mr. MCINTOSH. But you do or you don't have an open mind?

Ms. BROWNER. I haven't made a final decision. That decision ultimately will—I want to be honest with you; that decision, in my opinion, the law directs me to make it based on protecting the public's health with a margin of safety, and that is what I will do. This provision in the law is about the public's health.

It is true, as is true in almost any rulemaking, that when we propose to the American people where we would set a standard, we display what our current thinking is. It is a question of honesty on our part. We displayed it.

In the case of ozone, we said our current thinking leads us to point a way, but you tell us, should it be stricter? Should it be 0.07? Should it be 0.09? Should it be 0.12? All of that is displayed, and comment is solicited on all of that.

Mr. MCINTOSH. I think that is very important. I think you are absolutely right, you have to signal to the public which direction you want to go to, what the preferred option is for the Agency, based on your understanding of the data and information available, and solicit comments. But also important to that is an open mind that there may be multiple choices and alternatives to reach the goal that is specified in the Clean Air Act.

Ms. BROWNER. We will go where the science takes us.

Mr. TIERNEY. Mr. Chairman, it is my turn to question.

Mr. MCINTOSH. Mr. Tierney, go ahead.

Mr. TIERNEY. I suspect what it may be is, with an open mind, the Administrator may decide that there is or is not only one or that there are two or there are three or whatever, and I think that is the fair question to put here.

Ms. BROWNER. I don't prejudge anything at this point. I take public comment, and I review it thoroughly.

Mr. TIERNEY. I appreciate that, and the air is clear enough on this side of the room, we heard distinctly what you had to say and thank you for it.

Let me ask you something that may be basic, but I don't pretend to know all the science involved in this. Can you tell me a little

bit about the PM standards and what it is we are concerned about and how it gets into the body systems or how it may be destructive and at what levels it has different impacts on us?

Ms. BROWNER. There are all kinds of particles in the air of varying sizes. Today, our effort to reduce particles in the air has focused on something called PM10, that 10 is a measurement, it indicates a coarse-sized particle.

What the science now shows is that, in fact, the smaller particles, the finer particles, 2.5, have very real human health effects. And I will just be very simple with you; it is a little graphic, but I think it is the best way to understand this.

In the case of large particles, your body may be able to cough them out, you may be able to blow them out and get rid of them. In the case of the little tiny things, these are tiny, they go right into your lungs, and they embed in your lungs, and what numerous studies have shown is, when those fine particles, those little tiny things—you can't see them—reach a certain level in the air—there is a certain amount of them in the air—people experience premature death and other respiratory illnesses, and that is what, for example, the American Cancer Society's health records are in part about.

Mr. TIERNEY. Do these have a different effect on children than adults, a child is liable to breathe in more or less?

Ms. BROWNER. Children are obviously always affected differently by environmental—what is the word I want? Their bodies are different. They are growing, their lungs are still developing, they breathe more air per pound of body weight than an adult, they drink more water per body weight, et cetera, so obviously we do have to—and I think appropriately—consider how something affects our children and not just how it might affect a man weighing 150, 160 pounds.

Mr. TIERNEY. Has the CASAC—the Clean Air Scientific Advisory Committee—given to you its closure letters?

Ms. BROWNER. Yes, we have two closure letters, one on ozone and one on fine particles. I think we have made those available to committee. We would be more than happy to make them available again.

Mr. TIERNEY. When this group of 21 individuals was selected to be a part of this advisory committee, were their names made public?

Ms. BROWNER. Oh, yes, and they have conducted many public hearings which were noticed in the Federal Register and people could participate in.

Mr. TIERNEY. To your knowledge, was there ever any objection to any one of these individuals serving in the capacity——

Ms. BROWNER. No.

Mr. TIERNEY. Nobody questioned their credentials or anything?

Ms. BROWNER. Not to my knowledge, no.

Mr. TIERNEY. I yield back my time. I have no questions.

Thank you, Administrator.

Mr. MCINTOSH. Thank you, Mr. Tierney. That is a nice break from precedence.

Let's turn now to the concluding phase of our questions for this panel, which we had agreed to earlier would be 15 minutes of ques-

tions on each side, controlled by me as the chairman and Mr. Sanders as the ranking minority member.

Let me first yield 4 minutes to Mr. Snowbarger. He indicated to me he had some additional followup questions on the Regulatory Flexibility Act.

Mr. SNOWBARGER. Thank you, Mr. Chairman.

And, very frankly, I think these are short answers, because I am really just trying to make sure that I understand what your position is on the legal position of EPA as it relates to SBREFA. The first question: Do you consider the EPA is subject to SBREFA?

Ms. BROWNER. Absolutely.

Mr. SNOWBARGER. And you would agree that because SBREFA provides for it, this rule will be subject to judicial review under SBREFA?

Ms. BROWNER. The certification, yes, would be subject to judicial review; yes, we would agree.

Mr. SNOWBARGER. You don't agree the PM standard would be subject to judicial review?

Ms. BROWNER. Yes, I'm sorry, we do.

Mr. SNOWBARGER. I thought you were qualifying your answer.

Ms. BROWNER. I think we may have some confusion. Can you restate the question? I want to make sure I answer the question I thought you asked.

Mr. SNOWBARGER. Well, both in terms of the certification and in terms of the PM standard—well, and the ozone standard as well, that those rules would be subject to judicial review under SBREFA.

Ms. BROWNER. Under the Clean Air Act, both ozone and fine particles are subject to judicial review; we absolutely agree.

Mr. SNOWBARGER. But you don't think small business has a particular special right that has been granted to it under SBREFA that they could exercise here?

Ms. BROWNER. Our certification is reviewable under SBREFA, we would agree.

Mr. SNOWBARGER. But not the standard.

Ms. BROWNER. The standard—you get the judicial review. The standard is reviewable under the Clean Air Act. SBREFA doesn't require us to clean air standards, so what is reviewable is the certification and whether or not that was appropriately made.

Mr. SNOWBARGER. And whether or not you followed the appropriate procedures.

Ms. BROWNER. It is all judicially reviewable.

Mr. SNOWBARGER. My understanding is you have had some informal small business groups that have reviewed this process. Would you agree, however, that those informal reviews do not meet the requirements under SBREFA?

Ms. BROWNER. We have had conversations with both the Small Business Administration and with small businesses.

Mr. SNOWBARGER. I understand. I think the question is fairly simple. I mean, you have indicated you didn't think SBREFA applied to this, and what you were doing with the small business groups was doing something informal and not anything you were required to do. Therefore, they must not have been in compliance with SBREFA, is that correct?

Ms. BROWNER. We believe we have gone beyond the legal requirements of SBREFA in reaching out and working with the Small Business Administration and the small business community.

Mr. SNOWBARGER. These do not constitute the small business panels that are required by SBREFA?

Ms. BROWNER. We don't agree they are required, but we are working with small business.

Mr. SNOWBARGER. SBREFA requires small business panels if it applies. You don't think it applies, fine. There is no argument you can make if a court says you should have done it, that you can go back and say we did it? These do not comply with that requirement, SBREFA?

Ms. BROWNER. Obviously, you know, we have spent a good deal of time reviewing all of the requirements to ensure this is a fair process, not just within the letter of the law but within the intent of the law; and we are certainly working with small businesses, with the Small Business Administration, in terms of how—both the process in terms of setting or proposing a standard and making a final decision in terms of setting the standard and then, obviously, in terms of implementation.

I might just add, you know, we would be more than happy to provide to the committee where we are using under SBREFA the panel procedure in terms of bringing together I guess OMB, EPA and SBA to discuss specific proposals. We would be more than happy to provide that.

Mr. SNOWBARGER. I understand that. But the panels that you brought together on April 18 and March 18 are not panels under SBREFA?

Ms. BROWNER. We did not suggest that they were.

Mr. SNOWBARGER. Now, in your certification, this is what I understand the certification to be, you have certified that there will be no significant additional impact on small business entities as a result of your new proposed standards?

Ms. BROWNER. We have certified——

Mr. SNOWBARGER. That there would be no significant additional impact on small business entities——

Ms. BROWNER. The difference we are having here is our understanding of the statute is it provides for a certification of no significant economic impact on a substantial number——

Mr. SNOWBARGER. Fine.

Ms. BROWNER [continuing]. Of small entities.

Mr. SNOWBARGER. OK. So you are certifying that there will be no significant economic impact on a substantial number of small business entities as a result of the new proposed standards?

Ms. BROWNER. Subject to the requirements of the proposal. We made the certification at the time of proposal. That is what the law, SBREFA, allows for.

Mr. SNOWBARGER. I understand. I am trying to get a comfort level that I can go home and tell small business they have now been guaranteed there is no significant economic impact on them based on your adoption of these standards.

Ms. BROWNER. Changing the public health standards, if that is, in fact, where this process concludes, does not in and of itself, come mid-July or any time thereafter, require a small business or a large

industry to do anything of a particular sort. States, led by their Governor——

Mr. SNOWBARGER. There will be no significant economic impact.

Let me followup with one question, if I might, Mr. Chairman, and ask for 30 seconds.

Mr. MCINTOSH. Sure, 30 seconds.

Mr. SNOWBARGER. You have filed for an extension of time, 60-day extension of time, to comply with the court's order, as I understand it; and in that you have indicated, given the flexibility—given the complexity—I have got flexibility on my mind—given the complexity of the scientific and technical issues and the importance of the public health policy concerns at stake, any less time than the 60-day extension for public comment would deprive the public of an opportunity to fully address all of the issues involved.

Now, I guess my question is, is there a compelling reason why we cannot go back and get this right and make sure that we have complied and not raise that as an issue and potentially jeopardize the implementation of the standard if you think it is the appropriate one?

Ms. BROWNER. We are under a court order because prior administrations failed to follow the directions of the Clean Air Act to get a 5-year review done on fine particles. We did go back to the court and ask for some additional days. They declined to give us all of the days we asked for.

But, again, this is not about 30 days or 60 days. This has been the better part of a decade and, most specifically, the last 4 years. What that judge's order has required us to do at EPA is ask people to work nights, weekends and holidays; and that is what we will do.

The American people were promised something by the Congress. It was a 5-year review. It hasn't happened. We are going to deliver on that promise of the Clean Air Act. That is what we told the court, and that is what we tell the American people.

Mr. MCINTOSH. Cindi, how much time do I have remaining?

The CLERK. You have 9 minutes.

Mr. MCINTOSH. I was going to go and give you the 15 minutes.

Mr. SANDERS. It might be more interesting to go back and forth.

Mr. MCINTOSH. Let me take a couple of minutes to followup, and then we will be able to do that so we can follow the line of questioning.

Now, Ms. Browner, you just mentioned the court has imposed a deadline and that is the compelling reason to proceed without going back and redoing a regulatory flexibility——

Ms. BROWNER. I didn't say that. I didn't say the court's timeframe in any way has to do with the RFA. I didn't say that. I said, there is a court order, that we did ask for an extension of 60 days. They granted 30 days. I explained what that means to us. I didn't say anything about the RFA. I didn't say that.

Mr. MCINTOSH. His question was, is there a compelling reason not to do regulatory flexibility——

Ms. BROWNER. Maybe we could ask the court recorder to read it back. It was not about the RFA. If it was, I didn't understand that; and I am more than happy to reanswer it.

Mr. MCINTOSH. Why don't we do that? We will treat it as a new question.

Do you have a compelling reason not to do a Regulatory Flexibility Act analysis?

Ms. BROWNER. We are doing a Regulatory Impact Analysis. We do not believe that we are required to do a Regulatory Flexibility Act analysis because these are public health standards out of which no specific actions are required by any small entity per se. Moreover, it is the States who will decide which industry, which business, reduces their pollution.

Mr. MCINTOSH. I am asking a different question. Is there a compelling reason not to do it out of your own discretion? Let me give you a very compelling reason why you should consider doing it, and that is the reason I am holding this hearing today.

I think we are going to do severe damage to our efforts to clean the air by creating this legal uncertainty. We have talked about, earlier, that SBA believes that the Agency is required to do the Regulatory Flexibility Act analysis. You told us earlier you don't believe you are required to do that. That automatically tells me there is legal uncertainty and there will be a lawsuit that will delay this for a long time.

I think that has serious consequences. Frankly, it means we are going to spend a lot of money for lawyers, rather than actually help the children that you in your speech very eloquently pointed out, we in Congress, and you in the Agency are trying to do. So my question is different. It is not whether you are compelled to. Is there any reason why, as a discretionary matter, you won't do it?

Ms. BROWNER. How would I do it? Until a Governor decides within their State which industry should reduce their pollution of the public's air, how would I do that kind of analysis?

I don't want to dictate to your Governor what he should do anymore than the Clean Air Act when it was passed by Congress told EPA to. I can't answer your question.

Mr. MCINTOSH. Let me propose one avenue how to do that.

Ms. BROWNER. That would be helpful.

Mr. MCINTOSH. One of the reasons—and Mr. Sanders questioned my use of the word fraud, but one of the reasons I chose that strong language is, while you certified there are no impacts on small businesses in order to meet the requirement of the Small Business Regulatory Flexibility Act, at the same time, you submitted documents for the public record that did a Regulatory Impact Analysis; and I will quote from it on pages ES 11 and ES 12.

Under the heading "Cost and Economic Impact Analysis," there is a statement that is a conclusion based on the analysis, "Therefore, these small establishments may experience potential significant impacts."

Now, you have gone through the effort on the Regulatory Impact Analysis. Why not apply that to regulatory flexibility analysis?

Ms. BROWNER. What the Regulatory Flexibility Act was about since its inception in 1980, and what EPA has used the Regulatory Flexibility Act on numerous occasions to do is make adjustments so any one-size-fits-all approach of a regulation doesn't inadvertently or disproportionately affect small business. It is a great statute because it gives an agency the ability to say, you are right; if

we set a regulatory requirement, it may have a disproportionate impact.

Mr. MCINTOSH. I understand. So the mandate is to choose——

Mr. TIERNEY. Can we hear the rest of the answer, please, Mr. Chairman?

Mr. MCINTOSH. You said the mandate of the act——

Mr. TIERNEY. Can we hear what she said? She is answering your question. We think it is informative. If you really want her to be informative, we would like to hear the end of it.

Mr. MCINTOSH. If you want to grant me more time, I will grant more time to repeat what the act says.

I know what the act says. I helped write the act, and I know what it was intended to do. What it was intended to do was require the Agency to deal with this analysis so it could indeed pick among several options which would have the least impact on small entities.

Ms. BROWNER. But there are no options before us today in terms of what a Governor might choose.

Mr. MCINTOSH. But there are options for different standards.

Ms. BROWNER. No.

Mr. MCINTOSH. You told us earlier you had not made a decision——

Ms. BROWNER. There no options.

Mr. MCINTOSH [continuing]. Among several options for different standards.

Ms. BROWNER. For a public health standard. I will just use——

Mr. MCINTOSH. A public health standard that in your own words you say, therefore, these small establishments may experience potentially significant impact on the preferred standard that EPA has given public notice on.

Ms. BROWNER. Or any other standard. The point is——

Mr. MCINTOSH. No, no, that is the problem. Without doing a Regulatory Impact Analysis——

Ms. BROWNER. We did a Regulatory Impact Analysis.

Mr. MCINTOSH. Without doing a regulatory flexibility analysis, we don't know whether the other standards would have less of an impact?

Ms. BROWNER. Can I please have a moment?

Mr. MCINTOSH. I mean, do we? Without doing it——

Mr. SANDERS. Mr. Chairman, with all due respect, if she is being asked a question, please let her respond?

Mr. MCINTOSH. I would like to have an answer, yes.

Ms. BROWNER. There are a variety of tools which are important to making an informed decision. The Regulatory Flexibility Act—as you pointed out, you are one of the authors of it—is extremely important because it allows an agency, once a technology perhaps is required to be used by certain industries, to make adjustments for the small businesses within that requirement. We use it and would be more than happy to give you a list of all the times we have used that law to allow us to move beyond a one-size-fits-all approach to air pollution and other types of pollution reductions.

The Clean Air Act is very clear in saying that the States develop individual plans for reducing their pollution. I cannot tell you today what any individual State will choose, nor would it be appropriate

for me to do that, to preordain for them what kind of choices they may ultimately make.

However, in an effort to help inform discussion, which we think is important, and it should be thorough and lively, we do do something which is called a Regulatory Impact Analysis under an Executive order signed by a President you served and then amended by this President.

Mr. MCINTOSH. Let me ask you to conclude. All of that has been established so far with the testimony. My time is limited. If folks want to give me some additional time, I will gladly let you go and explain all of those which the committee is well aware of.

Mr. SANDERS. It is your time. Do whatever you want.

Mr. MCINTOSH. Let me focus on a couple of other questions which I think are important for the record.

Mr. SANDERS. I suggested before that I thought it might be more useful for us to go back and forth. I don't know how much time you have used.

The CLERK. The chairman has 5 minutes left.

Mr. SANDERS. You have used 15, and I haven't used any.

Mr. MCINTOSH. Let me proceed to let you use your time.

Mr. SANDERS. I will use 5 minutes and then go back to you.

Mr. MCINTOSH. Certainly.

Mr. SANDERS. Let me begin by thanking Mr. Barr for quoting you, because, let me tell you very frankly, if you did not understand that your job is to stand up and protect the health of the children of this country, you should not be where you are right now. I applaud you for your statements.

Mr. McIntosh a few moments ago talked about lawsuits. Well, nobody wants lawsuits. But it is no great secret I suspect we have a few of them in the room right here, that the major polluters of America will spend millions and millions of dollars trying to destroy environmental regulations to protect clean air. They will do everything they can, and that has been the track record for the last 15 or 20 years.

So maybe if we don't want lawsuits and we don't want contentiousness, maybe some of the major polluters in this country might want to hold back on spending millions and millions of dollars in fighting every regulation that seems to be passed representing the health and welfare of the people of this country.

I think, in the midst of this very interesting discussion, some of the most important points seem to be pushed aside. And the most important point to my mind is that what we have heard today, and I have not heard—I have not heard people disagree with this, is that people who know a great deal about this issue are suggesting that we can prevent the deaths prematurely of 15,000 Americans and that we can prevent suffering and illness of 250,000 children.

Now, how much is that worth? How much is that worth? I would suggest that, in a civilized country, it would be inexcusable for our government not to move rapidly to end that terrible waste of life.

What kind of country are we where we say, yes, we know that 15,000 people are dying prematurely, that little children are becoming terribly sick, but we are not going to do anything about it? If that is what this Government was about, that would be a terrible shame; and I don't think that is what we are about.

I wanted to tell Ms. Browner that despite what she heard today, the vast majority of the American people want you and the administration to stand up and protect the health of the American people. That is what they want. That is what every poll indicates. And while we know that some of the polluters are spending huge amounts of money trying to challenge virtually every environmental regulation we have, they are not operating on behalf of ordinary Americans, and that is not what the American people want.

Ms. Browner, last week we heard from Dr. Munzer, who was a lung specialist and a former president of the American Lung Association. He testified that the negative health effects of emissions of ozone and fine particulates are well established. They both cause asthma attacks, and fine particulates also lead to a number of cardiopulmonary problems and even premature death.

Would you care to comment on that?

Ms. BROWNER. Study after study finds that the results of certain levels of air pollution are, in fact, premature death, aggravated asthma, large numbers of respiratory illnesses. Asthma now represents the single largest cause of childhood hospitalization in the United States. More children are admitted to the hospital because of asthma than for any other reason.

While it may be that some would suggest a future where we keep our children inside on the 4th of July because the air pollution is too high, that is not what the Clean Air Act promised the American people, and that is not what we will do in accordance with the law.

Mr. SANDERS. Ms. Browner, we have heard a lot of discussion about costs, and that is an important issue. Nobody here wants to see businesses suffer in any way that is unnecessary.

Last week we heard from Dr. Schlesinger, a biochemist from Duke University, who told us that the proposed standards will provide additional environmental benefits—the reduction of acid rain and the protection of plant and animal diversity.

I would like to put into the record, when we talk about economic costs, I come from a very beautiful State. We have a strong tourist industry. We would invite all of the Members to come up during the fall to see the color of our leaves.

When you talk about economic impact, some of us don't want to see our trees being destroyed by acid rain. That is an economic issue. That is an issue of environmental concern that we have. We don't want to see our timber industry and our maple sugar industry be impacted negatively by this pollution. We don't want to see the basic beauty of the State of Vermont or New England or the Northeast being impacted. That is an economic issue I would like to place into the record as well.

But I would like, Ms. Browner, to also comment on Bruce Bertelsen, the executive director of the Manufacturers of Emissions Control Association, who testified that the estimated cost of reaching proposed clean air standards are typically greatly overstated because technological advances are not taken into account.

Is that something you would like to briefly comment on?

Ms. BROWNER. Yes, that is absolutely true. If you look at the 25-year history of the Clean Air Act, what you see is a wonderful story about American industry. They rise to the challenge each and every time.

When we began the debate in this country about acid rain, some in industry projected costs of $1,000 per ton of emission reductions. EPA itself predicted costs of $600 per ton. Today, on the Chicago Board of Trade, you can buy a credit for less than $100.

Industry rises to the occasion over and over again; and the costs of reducing pollution have been proven to be, through real-life experience, far less than anyone suspected or projected on the front end. And the benefits to the health of the American people far greater than anyone projected.

The Clean Air Act does not allow me to make a cost-benefit decision. This is a public health decision. There are other sections of the law dealing with toxic chemicals in the air that are cost benefits. This is not.

Mr. SANDERS. The point you are making is throughout the process people have come up with grandiose estimates as to the cost; and, in fact, as a result of the changes in technology, the costs end up being a lot less.

Ms. BROWNER. The wonderful news is technology advances, thanks to American industry.

Mr. SANDERS. Ms. Browner, last week, at our first hearing, we heard some discussions from some panelists who suggested that, as a result of these regulations, people in America would not be able to use their lawn mowers, people would be prevented from burning logs in their fireplace, people would be prevented from driving their cars if they were the only passenger.

We also heard—coming from a dairy State, I thought it was pretty intriguing—that cows would be wearing diapers. We look forward to that.

Would you want to comment about these rather frightening and onerous predictions?

Ms. BROWNER. There is nothing in the proposal which we are reviewing public comment on in terms of the public health standards that will do any of that.

As I have said before, the Clean Air Act I think is quite smart in giving individual Governors the authority to design individual State plans for pollution reduction.

Mr. SANDERS. So you don't think it is true the diaper industry is really going to be moving forward rapidly by producing diapers for cows? We shouldn't all invest in the diaper industry?

Ms. BROWNER. We are not seeking support from the diaper industry.

Mr. SANDERS. I would ask the clerk how much time is left?

The CLERK. Seven and a half minutes.

Mr. SANDERS. Dennis, do you want to go?

Mr. KUCINICH. Yes, please.

Mr. MCINTOSH. That would be fine.

Mr. KUCINICH. Thank you very much. Would you explain to this committee what you do to work with small business and industry to come to compliance?

Ms. BROWNER. We have a number of programs across the Agency, not just within our office, to work with small businesses.

Most recently, we have created a small business compliance center where we say to small businesses, look, we understand these rules may be difficult, whether it be air, water, waste. If you volun-

tarily come in, you work with us to solve a problem. If there is not a pattern of behavior there, we will set aside the penalty; we will set aside the enforcement action.

Our goal is to find how best to work with small businesses to achieve compliance of environmental requirements.

Mr. KUCINICH. So you are not trying to shut business down?

Ms. BROWNER. No. We have had a number of very successful projects with small businesses.

For example, we have been involved with small printers across the country to design a blueprint of how better to manage their facilities for environmental purposes. We have worked with metal finishers. There are any number of small business groups that we have been working with quite successfully to find how best they can facilitate, small business by small business, do their part to protect the environment.

Mr. KUCINICH. Which small businesses have the greatest difficulty coming to compliance as a category, can you state?

Ms. BROWNER. It is hard to answer, because we have so many different laws that we work to implement with small business—air, water, waste being the primary ones. The challenges will vary from small business to small business sector.

Mr. KUCINICH. Let's shift for a moment to large business.

The Governor of Ohio, Governor Voinovich, testified before the committee last week. I really didn't get a chance to ask him a question. I felt like it was a buzzer shot, Mr. Chairman, near the end. You are familiar with those.

Mr. MCINTOSH. We can probably send it to him to answer.

Mr. KUCINICH. The point he was making, though, I thought was interesting. And he has said repeatedly that Ohio, and specifically he mentioned Lorain, would not be an attractive place to continue automobile production because the EPA and your rules and regulations would discourage it. And he has said that you are directly to blame for the loss of jobs and the shutdown of manufacturing facilities and that, furthermore, the EPA will make industry defunct in manufacturing dependent areas.

I think that is an accurate characterization of what he said. I am asking you, how do you respond to that?

Because there are people in communities like mine who are worried about their jobs. When you have a high-ranking government official who makes those kinds of statements, they ask to be answered by someone in authority. So what is your answer?

Ms. BROWNER. First of all, we would be more than happy to provide to you the facilities which we have worked to issue permits on, automobile manufacturing facilities in States across the country which we have worked to grant permits to so they can expand operation, develop new operations, whatever, in nonattainment areas. It has not only been in attainment areas.

Second, what I would say most specifically is that your Governor will make the decisions for your State in terms of how best to reduce their air pollution. That is the beauty of the Clean Air Act as passed by Congress. It will be your Governor. It will not be the EPA.

Mr. KUCINICH. But he is saying your regulations—in particular, in the Cleveland area, we have the Ford casting plant. Ford is in-

vesting $80 million total over the next 5 years to install equipment necessary to comply with the current standards. He is saying, look, what are you trying to do? Are you trying to shut this casting plant down with these new regs? He is charging that you are.

Ms. BROWNER. No.

Mr. KUCINICH. What is the answer?

Ms. BROWNER. As far as I know, that facility has a permit. They can operate.

Mr. KUCINICH. But what about the new regs here? Now not just the Cleveland area but all across the country people are worried about that. What do you say to them?

Ms. BROWNER. That each Governor will have on the order of 5 to 10 years to determine with the business and the individuals of his or her State how best to reduce pollution, and there is no requirement that your Governor or any other Governor single out any individual business or any individual business sector. There is flexibility in terms of what they can do.

I will tell you this. I think this is important. If we were to conclude the process by adopting the standards we proposed for ozone—we have not done that, and we have not made a final decision, but let's say that were to happen—70 percent of the areas that would not immediately meet a tighter public health standard could do so through currently available technologies. No new technologies. Through currently available, on-the-book solutions.

Some of those include efforts that we have been engaged in with individual States. Some of those, quite frankly, include efforts with industry.

For example, the work we do with Detroit to develop an on-board canister inside each car you buy next year, a little device you won't know is there, but every time you fill your car with gasoline there will be less pollution in the air because of that cooperative work between EPA and industry, less than $10 per car.

And I can give you any number of examples 70 percent of the areas could meet, if that is where the process concludes, a tougher public health standard for ozone through currently available technology.

Mr. KUCINICH. Thank you, Mr. Chairman. I am just about complete, so I can yield to my colleague.

I want to make this comment. I think what we need to establish in these hearings is that clean air and jobs are not mutually exclusive, that clean air and the progress of small business, which I think we all care about, is not mutually exclusive, that clean air and American manufacturing, there is no mutual exclusivity there. And if we can do that, I think we all can win in this process. We can find a way to encourage small business, protect our basic manufacturing industries, protect the health of our people and have decent quality air standards at the same time.

I mean, that is the kind of challenge we have, which is a difficult challenge, to be sure. It is one that brings us to this table and gets us into very spirited debate. But that is what we are challenged to try to do and to try to—actually, we have to have it both ways I feel.

Thank you very much, Mr. Chairman. Thank you.

Mr. MCINTOSH. Thank you.

Cindi, could you let us know how much time is on each side?

The CLERK. The majority has 5 minutes; the minority has 2½.

Mr. MCINTOSH. OK. Let me switch gears slightly from the earlier line of questions and ask you, Ms. Browner——

By the way, thank you. I know we have delayed past the expected time we were supposed to keep you, but I think it is important to get these out into the open.

Ms. BROWNER. We appreciate it.

Mr. MCINTOSH. Do you believe or is it the Agency's position that the regulatory impact analysis, not the regulatory flexibility analysis, meets the requirements of the Unfunded Mandates Reform Act?

Ms. BROWNER. No, that is not our position. I am more than happy to speak to our understanding of the Unfunded Mandates Reform Act. We are in no way maintaining that the RIA would meet the requirements of the Unfunded Mandates Reform Act.

Mr. MCINTOSH. If you could briefly, because I want to move on to a couple of other questions, explain why the Agency didn't do the cost-benefit analysis required by that act?

Ms. BROWNER. The Unfunded Mandates Act conference report does not require the preparation of any estimate or analysis if the Agency is prohibited by law from considering the estimate or analysis in adopting the rule. This is not a cost-benefit section of the Clean Air Act. It is a public health section of the Clean Air Act. So we read the conference report to tell us that we are not required to do that estimate, because the Clean Air Act tells us don't take into account the costs.

Now, just for the purposes of the Members' understanding, we did do that kind of analysis. I cannot use it in making the ultimate decision, but we did do it, because we thought it was important to informed discussion, and we did do it. But we are not maintaining that meets the requirements of the Unfunded Mandates Act. Our position is the Unfunded Mandates Act and the specific conference report would direct us not to.

Mr. MCINTOSH. Which we disagree. I think unless it is explicitly stated don't do it, if it is silent and that has been interpreted not to compel it, I think that is a different matter.

Ms. BROWNER. Well, the courts have routinely interpreted this section 109 of the Clean Air Act as saying the statute and its legislative history make clear that economic considerations play no part in the promulgation of standards. I mean, there is the lead industry, there is the American petroleum industry, there is——

Mr. MCINTOSH. That is a different standard than what the conference report was going to, where it is explicitly forbidden.

Ms. BROWNER. By law.

Mr. MCINTOSH. Let me yield a minute to Representative Barr.

Mr. BARR. I would ask to have the article to which I referred earlier by the distinguished chairman of the Commerce Committee, Tom Bliley, appearing on page 3 of the April 21 edition of Roll Call inserted into the record.

Mr. MCINTOSH. Seeing no objection, it will be done.

[The article referred to follows:]

Photo by Laura Patterson

Plenty of evidence suggests that new EPA proposals would have a profound effect on almost every American, writes Chairman Bliley.

Before New Regulation, EPA Must Clean Up Its Act

By Rep. Tom Bliley

The Environmental Protection Agency is proposing new rules on fine dust and ground level ozone that could dramatically expand the EPA's regulatory authority under the Clean Air Act.

Congress has an important obligation to ensure that these proposed regulations are based on sound science and that they actually improve the public health of all Americans. Unfortunately, the EPA has been less than forthcoming about the basis for these new proposals or the evidence supporting them — suspiciously so.

There is plenty of evidence to suggest that these proposals would have a profound effect on almost every American. According to the EPA, the new regulations would more than triple the number of so-called "non-attainment" cities — communities not in compliance with Clean Air Act standards — and bring those areas under rigorous federal control. The Clinton Administration's own Department of Transportation warns that the proposals will "require lifestyle changes by a significant part of the US population."

Considering how far-ranging the proposed new rules are, you'd think the EPA would be eager to justify itself by coming forward with its reasons — but you'd be wrong. There is mounting evidence that the EPA just doesn't want Congress and the American people to understand the facts behind these proposals.

Last December, I wrote to the Office of Information and Regulatory Affairs (OIRA), asking for an independent analysis of the EPA's proposed rules. OIRA is supposed to ensure that proposed new federal rules and regulations are justified; it was given this responsibility by an Executive Order signed by President Clinton as part of his "reinventing government" initiative.

What transpired in the wake of my letter showed me that OIRA's independence had been severely compromised by the EPA.

According to documents we ultimately received, the EPA injected itself into virtually every phase of OIRA's response to my letter. OIRA's first draft of its response to my letter, we found out later, was deemed too detrimental to the EPA to ever see the light of day. It was repressed after the EPA reviewed it and determined it to be "very damaging" to the agency's position.

No wonder the EPA suppressed the OIRA draft; it was a stinging indictment of the agency's proposed new rules. Among the counts: a charge that the EPA had proposed the new restrictions on fine dust particles even though there was a "lack of adequate research" on the topic.

The proposed EPA rules deserve a full and open debate — a debate that cannot happen without openness, transparency, and candor.

OIRA's draft letter also charged that the EPA's entire rulemaking process "did not fully conform" to the Administration's own guidelines for new federal rules — an accusation that underwent a 180-degree reversal after the EPA had a chance to sanitize the letter.

OIRA wasn't the only agency to criticize the new rules, however. In November, when the new proposals were circulated throughout the federal bureaucracy, they were greeted with a crescendo of boos — virtually every agency and department that was asked responded critically.

The President's Council of Economic Advisors accused the EPA of underestimating the true costs of implementing the proposed new rules "by orders of magnitude." The council calculated the actual cost of attainment at a staggering $60 billion — and that just for the portion of the regulations affecting ground-level ozone.

The Secretary of Transportation predicted that the new rules will cause "social and economic disruption," warned of "profound" enforcement consequences, and said it was "incomprehensible" that the Clinton Administration would "commit to a new set of standards without much greater understanding of the problem and its solutions."

The Small Business Administration said the new proposal "is certainly one of the most expensive regulations, if not the most expensive regulation, faced by small businesses in ten or more years."

The President's Office of Science and Technology Policy warned that, regardless of the potential merits of the new rules, they "cannot be effective if they are unachievable."

In fact, virtually the only federal agency to support the new proposals was Bruce Babbitt's Department of Interior.

Just last month, the Department of Agriculture weighed in with an opinion on the proposed rules that is truly frightening to those of us who are concerned about family farms. The department said the new standards "may impose significant costs" on American farmers, especially the 71 percent of US farms with annual sales of less than $40,000. The new regulations, according to the Agriculture Department, may drive up farming costs such as fuel, fertilizers, pesticides, and chemicals.

Equally disturbing is the reluctance of the EPA to come forward with the very data that form the basis for its contention that the new rules are justified in the first place.

The genesis of the proposed rules is found in two studies, published in 1993 and 1995, by researchers at Harvard University. Funded almost entirely by taxpayer dollars and commissioned by the EPA and the National Institutes of Health, these studies purportedly establish the adverse health impacts that may be associated with exposure to fine dust.

Ever since the studies were published, researchers have attempted to examine the health data on which they were based. Peer review is more than common in the scientific community, after all. Indeed, it's an article of faith that underlies the scientific method.

Yet for some reason, Harvard's researchers have guarded the data underlying the studies as if they were classified for purposes of national security.

Even after months of pressure from my committee, Harvard was unwilling to release the data, except under circumstances that are so restricted that I question whether they will be useful. An independent organization, the Health Effects Institute will be asked to impanel a group of "independent, impartial" scientists to review the data ("independent and impartial" apparently is used to exclude anyone who has voiced an option, either way, on the proposed rules). The data can only be reviewed at Harvard, and under tight security.

For its part, the EPA has represented itself to be supportive of open public disclosure of the data, but the facts suggest otherwise. For the record, both the EPA and the National Institutes of Health, as the financial patrons of the studies, have it within their power to obtain the underlying data and then, if they so chose, make them public. For some reason, they have chosen not to.

Let's be clear here: It was our money that paid for these studies. Our health is what these studies are all about, and the regulatory regime that these studies supposedly justify will affect every one of us.

These are critically important regulatory proposals. The proposed EPA rules deserve a full and open debate — a debate that cannot happen without openness, transparency and candor. It's time for the EPA to "come clean" on its Clean Air rules.

By Rep. Tom Bliley (R-Va) is chairman of the Commerce Committee.

Mr. BARR. Ms. Browner, do you have a copy of the Washington Legal Foundation petition to which I referred earlier?

Ms. BROWNER. Yes.

Mr. BARR. I would like you to turn to page 7, please; and I would like to state at the beginning that your quote at the middle of the page there I think, to which I have referred earlier and to which I would ask you to give the full context of, is included in the Washington Legal Foundation petition.

They state on page 7, from the beginning there, as you can see the first full sentence on that page, "For example, in her keynote address to the Children's Environmental Health Network Research Conference held in Washington, DC, on February 21, 1997, Administrator Browner specifically discussed the merits of the proposals for which EPA is seeking comment." That is the context I believe in which the quote that we referred to earlier was given.

"She acknowledged that the quality of our air has greatly improved over the years but blasted industry for opposing the current proposals." I agree the term "blasted" may be editorializing somewhat. But, aside from that, it goes on to state that "all but suggesting that industry is indifferent to asthmatic children."

Ms. BROWNER. Excuse me, Congressman Barr, I am not sure where you are reading from. I lost you in the document.

Mr. BARR. Let me give you the copy then. I thought you said you had a copy?

Ms. BROWNER. I think I have it. What page?

Mr. BARR. Page 7.

Ms. BROWNER. You are reading from a news report of BNA?

Mr. BARR. No, I am reading from the petition of the Washington Legal Foundation.

Ms. BROWNER. And they are quoting a BNA news report.

Mr. BARR. I think you know exactly what I am quoting from. I am quoting from page 7. I stated page 7 earlier.

Mr. SANDERS. I don't know what you are quoting from, and I would like to know.

Mr. BARR. You don't have to.

Mr. SANDERS. I sure do. I want to be informed. What are you quoting from?

Mr. BARR. I am tired of her dilatory tactics. I stated very clearly it was page 7, Mr. Chairman; and she acknowledged she had the petition. That is what I am reading from. Since there is some question about it, I would move that the petition be inserted in the record.

Mr. MCINTOSH. Certainly.

[The petition referred to follows:]

Before the
ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C.

IN RE: PROPOSED RULES TO REVISE
THE NATIONAL AMBIENT AIR QUALITY STANDARDS
FOR PARTICULATE MATTER AND OZONE
40 CFR PART 50, DOCKET NOS. A-95-54; A-95-58

PETITION OF THE WASHINGTON LEGAL FOUNDATION
TO DISQUALIFY EPA ADMINISTRATOR CAROL BROWNER FROM FURTHER
PARTICIPATION IN THE RULEMAKING PROCEEDING TO REVISE
THE PARTICULATE MATTER AND OZONE NAAQS AND
COMMENTS OF THE WASHINGTON LEGAL FOUNDATION OPPOSING
THE PROPOSED RULES TO REVISE THE PM AND OZONE NAAQS

INTRODUCTION

The Washington Legal Foundation (WLF) hereby petitions Environmental Protection Agency Administrator Carol Browner to disqualify herself from further participation in the the above-captioned rulemaking on the grounds that she has already prejudged the issues presented in these proceedings. In addition, WLF intends this submission to constitute its comments on the proposed revised standards.

The proposed rules seek public comment on a number of scientific matters and policy issues regarding the revision of the National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) and ozone. Under the Clean Air Act (CAA), 42 U.S.C. § 7409(d), the Administrator is required at specified intervals to complete a "thorough review" of such standards in order to determine, what, <u>if</u> <u>any</u>, revisions "may be appropriate."

The Clean Air Act further specifies in great detail the procedures by which these revisions, if any, are to be made. In particular, 42 U.S.C. § 7607(d) provides for the submission by any person of "written comments, data, or documentary information on the proposed rule" and the opportunity of interested persons to make "oral presentation of data, views, or arguments." 42 U.S.C. § 7607(d)(5). These provisions, as well as fundamental principles of administrative law, fairness, and due process, require the Administrator to carefully consider these comments and views, and not to prejudge the issues before the close of the public comment period and the conclusion of public hearings.

Unfortunately, Administrator Browner has made public statements before the close of the public comment period, as further described below, that clearly indicate that she has already made up her mind to promulgate revisions to both the PM and ozone standards. In particular, during Administrator Browner's Keynote Address to the Children's Environmental Health Network Research Conference held in Washington, D.C., on February 21, 1997, she emphatically and repeatedly stated that **"I will not be swayed. . . . I will not be swayed"** by any opposing views on EPA's proposed revisions to the PM and ozone standards despite the EPA's own admission that our air quality has dramatically improved over the years, and despite serious doubts about the medical causes of certain health impairments and whether these proposed standards would have the affect on health as EPA believes. This and other public statements clearly show that

Administrator Browner has made up her mind and will not give any consideration, let alone a meaningful one, to opposing comments and views.

Administrator Browner has therefore prematurely rejected the option of exercising the statutory alternative that the standards should not be revised at this time, and that any revisions be postponed until further study can be made as has been suggested by numerous parties, including most recently United States Senators John Glenn, Chuck Robb, Robert C. Byrd, Wendell Ford, and Jay Rockefeller in a letter to Administrator Browner dated March 4, 1997, a copy of which is attached hereto and adopted by reference. Such further study should also include the review of certain scientific data that the EPA has relied upon in setting the proposed standards, but has heretofore refused to release to the public for any review and critique.[1]

Consequently, Administrator Browner's public statements evidence a clear and convincing showing that she is unable to give meaningful consideration to the public comments submitted to her and the EPA in this rulemaking proceeding, including those submitted herein by WLF. Under these circumstances, fairness, due process, and judicial authority require that Administrator Browner be disqualified from these proceedings. If

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[1] The two essential studies are Dockery, D.W., et al, An Association Between Air Pollution and Mortality in Six U.S. Cities, N. England Journal of Medicine 329 (1993) and Pope, C.A., et al., Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults, Am. Journal Respir. Crit. Care Med 151 (1995).

Administrator Browner does not disqualify herself, any final revision to either the PM or ozone standard would be vulnerable to attack upon judicial review on that ground alone or in addition to the other numerous procedural and substantive flaws of this proceeding.

INTERESTS OF THE WASHINGTON LEGAL FOUNDATION

WLF is a national non-profit public interest law and policy center based in Washington, D.C., with supporters nationwide who will be affected by EPA's proposed revision of the PM and ozone standard. WLF has regularly participated in rulemaking proceedings before a number of federal agencies, including the EPA, as well as in litigation challenging the validity of agency rules, decisions, or policies.

For example, WLF filed a lawsuit on behalf of itself and a dozen U.S. Senators and Representatives against the EPA for its failure to complete a long overdue cost/benefit report of the Clean Air Act and for violating the Federal Advisory Committee Act. Washington Legal Foundation v. EPA, No. 95-2396(GK) (D.D.C.). The EPA has recently agreed to complete and file the report later this year to settle the lawsuit. In addition, EPA has also recently agreed to settle yet another lawsuit filed by WLF seeking agency documents regarding EPA's economic benefit computer model ("BEN") which is used to calculate fines imposed on regulated entities for environmental infractions. Washington Legal Foundation v. EPA, No. 93-1202(CRR) (D.D.C.). WLF uncovered evidence that the EPA was using false and misleading

calculations to justify higher fines, and WLF submitted an affidavit to the court from a former EPA employee who verified those charges. EPA has recently requested and received comments on how it should calculate the economic benefit. 61 Fed. Reg. 53026 (Oct. 9, 1996).

WLF's Legal Studies Division also publishes numerous monographs and other publications on a variety of regulatory topics. Of particular relevance to this proceeding, WLF published on February 21, 1997, a WLF Legal Opinion Letter by Congressman David M. McIntosh entitled "EPA Must Address Serious Concerns Over Proposed Clean Air Standards," a copy of which is attached hereto and adopted by reference in these comments. Recognizing that free market and other incentives are preferable to the command and control policies of government regulation, WLF's Legal Studies Division is also publishing a WLF Legal Backgrounder, "A New Strategy For Environmental Protection: Incentives For Zero Emissions" by James M. Thunder.

With regard to the issue of agency bias in rulemaking, WLF has filed a petition with the Federal Communications Commission seeking to disqualify its Chairman Reed Hundt from participating in a rulemaking proceeding in which he had publicly expressed his firm opinion about the relevant proceeding before the comment period was completed. See Petition To Disqualify Chairman Reed E. Hunt in PP Docket No. 93-253, Implementation of Section 309(j) of the Communications Act— Competitive Bidding, 220-222 MHz. In

addition, WLF participated in Association of National Advertisers, Inc. v. Federal Trade Commission, 627 F.2d 1151 (D.C. Cir. 1979), in which the impartiality of Michael Pertschuk, then-Chairman of the Federal Trade Commission, was challenged in an FTC rulemaking proceeding on the basis of public statements he made regarding the subject of those proceedings. Id. at 1156, n.7.

For all these reasons, WLF has an interest in ensuring that the current rulemaking proceedings are conducted in a fair and unbiased manner.

EVIDENCE OF PREJUDGMENT BY ADMINISTRATOR CAROL BROWNER

WLF submits that a clear and convincing showing can be made in the form of numerous public statements and remarks made by Administrator Browner and other EPA statements that, taken as a whole, would lead a reasonable person to conclude that Administrator Browner has already decided to revise the NAAQS for PM and ozone **before** all public comments were received by the EPA and **before** hearings were held in the post-comment period, and that she will not or could not give meaningful consideration to those public comments which are to the contrary. Accordingly, she must disqualify herself from these proceedings.

As previously stated, Administrator Browner has made numerous public statements to the effect that she has already decided that the PM and ozone standards will be revised, and that the only issue worthy of public consideration is how those

standards will be implemented.[2] For example, in her Keynote Address to the Children's Environmental Health Network Research Conference held in Washington, D.C., on February 21, 1997, Administrator Browner, specifically discussed the merits of the proposals for which EPA is seeking comments. She acknowledged that the quality of our air has greatly improved over the years, but blasted industry for opposing the current proposals, all but suggesting that industry is indifferent to asthmatic children. She states unequivocally that it was a "fact" that "science tells us those standards [including the current PM and ozone standards] are not adequate and that we have to move forward." She then concludes with the following flourish:

> Let me say this--when it comes to protecting our kids, **I will not be swayed.** If the science shows that we have to do more to ensure that our kids are safe from pollution, then that is precisely what we will do. And if someone wants to accuse me of doing too much and acting too forcefully to protect the health and future of our children, then so be it. **I will not be swayed.**

Browner Keynote Address at 5 (emphasis added).

Administrator Browner's remarks were also publicly reported. BNA's National Environment Daily reported that "Browner held up recently proposed air quality standards dealing with ground-level ozone and particulate matter as an example of EPA putting children first. She added that the agency will not back from its proposals just because industry representatives believe they have already done all they can." BNA National Environment Daily,

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[2] The implementation of those standards are, of course, subject to future notice and comment proceedings, and will not be considered by EPA in the current rulemaking proceeding.

"EPA Agency To Create Center on Children, Focus All Standards On Protecting Kids," Feb. 24, 1997.

Administrator Browner cannot argue that this statement does not indicate that she has prejudged the issue because she used the conditional term "if" when she said "[i]f the science shows we have to do more. . . I will not be swayed." This fig leaf of open-mindedness cannot mask her views because in the prior sentence, she said it was a **"fact"** that "science tells us those standards are not adequate and that we have to move forward."

In another recent public appearance specifically discussing the PM and ozone proposals, Administrator Browner similarly made statements that evidence her prejudgment of the issue. She unequivocally stated that:

> **The science is clear and compelling.** Taken together, these proposed standards would provide new protections to 133 million Americans, including 40 million children. . . . We're talking about fewer asthma attacks. We're talking about protecting elderly people. We're talking about protecting our children.
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> * * * *
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> For EPA, there is **quite literally no other alternative** but to propose to strengthen the public health standards [by adopting the proposals for both PM and ozone].

Remarks Prepared for American Enterprise Institute (AEI) Conference "Clearing the Air: An Examination of EPA's Proposed Regulations for Particulate Matter and Ozone," dated February 10, 1997 (emphasis added).

The science, however, is not "clear and compelling" on this issue, and even Administrator Browner is forced to admit in her remarks at AEI that these issues are "complex." Yet she has

unequivocally ruled out a statutory alternative legally available to her and one that WLF, Senator John Glenn and his colleagues, and many others have suggested, namely, that the current standards be retained, at least for the time being, while further study is completed so that a fully informed decision can be made, rather than promulgating the proposed standard now, the implementation of which will cost untold billions of dollars, and the health benefits uncertain.

Indeed, it might be argued that Browner's expressed concern for the health of asthmatic children may not be as genuine as she claims, or the problem not as severe as she portrays. At the AEI Conference, she reveals that the main purpose of the Clean Air Act's procedures for reviewing standards "is to ensure that we never get to the point **where the government tells Americans their air is healthy to breathe, when** the scientific community knows that, **in fact, it is not.**" AEI Speech at 2 (emphasis added).

But how does the EPA actually "tell[] Americans their air is healthy [or not] to breathe?" EPA informs the public about air quality on a day-to-day basis through EPA's Uniform Air Quality Index and Daily Reporting program.[3]

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[3] 40 C.F.R. Part 58, Subpart F-Air Quality Index (AQI) Reporting and Appendix G. If the AQI is 0 to 50 in a particular geographical area, the EPA tells the American people through state agencies and the media, that the air quality in that region that day is "**Good**"; if 51 to 100, they are told the air is "**Moderate**"; if 101 to 199, we're told the air is "**Unhealthful**"; if it is 200 to 299, it is described as "**Very Unhealthful**"; and over 300, the air is characterized as "**Hazardous.**" Generally speaking, the 100 level is the level set for the primary NAAQs level for five pollutants, including ozone and PM. States are free to impose more restrictive levels that trigger the various

Clearly, if Ms. Browner really believes that we are "at the point where the government tells Americans their air is healthy to breathe" when in fact it is not, that is, that the 100 AQI level dividing "healthy" air from "unhealthful" air is not an accurate description, then the EPA can lower the numerical scale for the various descriptors rather easily and quickly.

WLF finds Ms. Browner's and the EPA's relative complacency in keeping the public in the dark about what the EPA believes to be the true quality of the air very disturbing and unconscionable. Ms. Browner is apparently content to leave mothers of asthmatic children with the false impression that they can safely allow their children to play outdoors for extended hours on a particularly hot summer day, when, if properly informed and alerted about the true quality of the air as Administrator Browner believes it to be, would have chosen to limit their child's outdoor activity, and presumably prevent the very medical injuries which Ms. Browner is so concerned about.

At the conclusion of her remarks at the AEI conference where she has staked out her position, Ms. Browner reminds her audience that the "period of public comment is still in effect" and that an extension of the comment period was sought "in order that the American people may have a thorough, fair and informed public debate on the proposals," and that she has "an obligation to carefully consider all public comment before making a [formal]

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air quality alerts to the public, California being one such state.

final decision." Ms. Browner's passing concern for a "thorough, fair and informed public debate" appears, however, to be disingenuous and nothing more than lip-service to impartial agency decisionmaking. There can be hardly any doubt that she has made her decision, and that she will not "carefully consider all public comment" before casting that decision into stone.

Administrator Browner has made similar statements about the PM and ozone proposals on February 24, 1997, at Harvard University's Kennedy School of Government Forum. She brushes off industry criticism that the proposals are too costly or would entail limiting certain outdoor recreational activities as **"nothing more than scare tactics. They are false. They are wrong. They are manipulative."** She then demonizes industry opponents to the proposals by asking a self-serving rhetorical question: "[W]ould we accept, as the science shows us, large numbers of Americans experiencing real health effects, even death, because some in industry project "high costs" to reduce their pollution of the public's air. . . ?

In the first place, she begs the question that industry's pollution is the cause of the deaths and health effects, and that EPA's proposal would prevent those effects. As Administrator Browner announced on December 17, 1996 in releasing EPA's annual National Air Quality and Emissions Trends Report, "During the past ten years, ozone, carbon monoxide, lead, particulate matter, nitrogen dioxide, and sulfur dioxide -- the six air pollutants targeted in the Clean Air Act -- <u>have all declined</u>" and that over

the last 25 years, the emission of nation's six major air pollutants "declined dramatically" by 29 per cent while our gross domestic product increased 99 percent. (emphasis added).

Secondly, the source of the pollution is not entirely the traditional industrial sources as Ms. Browner would have her audiences believe. For example, with respect to PM-10 emissions, the EPA Trends Report tells us that

> [E]missions from traditionally inventoried source categories (fuel combustion, industrial processes, transportation) **make up only 6 percent of total PM-10 emissions nationwide.** The remaining emissions come from **natural sources** (wind erosion) and the miscellaneous category, which contains emissions for agriculture and forestry, wildfires and managed burning, and fugitive dust from paved and unpaved roads. Of these, fugitive dust makes up the greatest share of all PM-10 emissions (68 percent), followed by agriculture and forestry (20 percent).

EPA Trends Report at 27 (emphasis added).

It thus appears that natural sources and fugitive dust are the real culprit of PM-10 emissions, not industrial pollution as Ms. Browner claims, suggesting that a great deal of progress can be made to reduce the PM-10 levels even further than they are by simply paving more roads.[4] Accordingly, EPA and Ms. Browner continually mislead the public by falsely stating the source of the alleged problem as being industry. In a November 27, 1996,

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[4] Fugitive dust from unpaved roads accounted for almost 12 million short tons of PM-10 in 1995, whereas PM-10 from all industrial processes, including chemical, metal processing, petroleum and related industries, solvent utilization, storage and transport, waste disposal and recycling, and other industrial processes accounted for less than **one** million short tons. Emissions from residential wood burning fireplaces and stoves is almost 40 percent as great as the emission from all industrial sources. Trends Report at 74, Table A-6.

EPA Press Release entitled "EPA Proposes Air Standards For Particulate Matter and Ozone," EPA categorically states: "Particulate matter (PM), or soot, comes largely from combustion from sources like power plants or large incinerators." Yet the Trends Report, as noted, shows that clearly not to be the case, with all industrial sources accounting for less than 6 percent.[5]

The source of ozone is more complex because ozone "is not emitted directly into the air by specific sources." Trends Report at 21. Rather, certain chemicals combine with sunlight to form ozone, such as "gasoline vapors, chemical solvents, combustion products of various fuels, and consumer products." The sources are found not only in large industrial facilities, but "small businesses such as bakeries." Trends Report at 21. Ozone formation, however, is affected by changing meteorological conditions.

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[5] In addition to Ms. Browner's misleading and conclusory statements of the problem and its cause as WLF has discussed, Administrator Browner and the EPA continue to characterizes EPA's PM-2.5 proposal in public as one involving "soot" and the ozone proposal as one involving "smog." Her use of the term "soot" conjures up images of visible dirty particulate matter blanketing our homes and playgrounds. Yet the term "soot or smoke" is properly used to describe particles that are "large and dark enough" to be seen as soot or smoke. Trend Report at 26. "Others are so small they can be identified only with an electron microscope." Indeed, the current regulated PM-10 particles have "a diameter of 10 micrometers (0.0004 inches)." Id. The proposal to set the standard for PM-2.5 means the regulation of particles that are only 2.5 micrometers (0.0001 inches), or one-fourth the size of the current microscopic PM-10. These tiny invisible particles are certainly not "soot"; the EPA and its Administrator repeatedly mislead the public into thinking that the EPA PM proposal is simply about is eliminating visible dirty "soot". EPA and Ms. Browner should discontinue using that loaded and misleading term in these proceedings.

WLF submits that Administrator Browner's statements at Harvard and other public fora clearly indicate that she regards industry as the primary source of pollution, and would categorically reject any arguments they or like-minded opponents may make against the proposals as "false," "wrong," and "manipulative." If anything, Ms. Browner's description of the problem, its causes, and its solution has been false, wrong and manipulative.

These public statements by Administrator Browner evidence a clear and convincing showing that she has made up her mind on the two proposals and thus, will be unable to give, or will not give, meaningful consideration to the comments by WLF and others who advocate a contrary position. As the following section demonstrates, Administrator Browner must— and, at the very least, should — recuse herself from these proceedings in order to maintain fairness and integrity, and the appearance of fairness and integrity, in this important rulemaking proceeding.

STANDARD FOR DISQUALIFICATION IN RULEMAKING PROCEEDINGS

The standard for disqualifying agency decisionmakers from rulemaking proceedings was enunciated by the United States Court of Appeals for the District of Columbia Circuit in the case of Association of National Advertisers, Inc. v. Federal Trade Commission, 627 F.2d 1151 (D.C. Cir. 1979). In that case, the Association of National Advertisers (ANA) and other industry groups petitioned then-Chairman Michael Pertschuk of the FTC to

disqualify himself from a rulemaking proceeding in which the FTC proposed to limit children's advertising as suggested by an FTC staff proposal, on the grounds that Pertschuk's prior public statements demonstrated his bias and prejudgment of the issue. When he refused to do so, and when the Commission ruled (without Pertschuk participating) that Pertschuk need not be disqualified, ANA and others brought suit in federal court seeking his disqualification from the rulemaking proceeding.

The district court ruled against Chairman Pertschuk, applying the disqualification standard in Cinderella Career & Finishing Schools, Inc. v. FTC, 425 F.2d 583 (D.C. Cir. 1970). In Cinderella, the court held that in an adjudicatory agency proceeding, an official would be disqualified if it appeared that the decisionmaker "in some measure adjudged the facts as well as the law of a particular case in advance of hearing it." Id. at 591 (emphasis added). However, because the ANA case dealt with a rulemaking proceeding in which the court recognized that agency decisionmakers will "in some measure" have already formulated general opinions about a subject before embarking upon rulemaking proceedings, the ANA court held that the adjudicatory standard for recusal should not apply in informal rulemaking. Accordingly, the court ruled that a agency decisionmaker would be disqualified in a rulemaking proceeding if it appears by a "clear and convincing showing" that the decisionmaker "has an unalterably closed mind on matters critical" to the specific agency proceeding. ANA, 627 F.2d at 1170-71.

Applying this more demanding standard, the court examined the strongest public statement made by Chairman Pertschuk on the subject, a speech delivered at a conference in November 1977, some six months before the FTC adopted its notice of proposed rulemaking on children's advertising. ANA, 627 F.2d. at 1171. The Court concluded that the speech and related statements merely fleshed out Pertschuk's theory that the FTC might have general legal authority to regulate in the area of children's advertising. Further, the court noted that the remarks were made well before the notice of proposed rulemaking was issued. Id. at 1173. So viewed, the statements "merely demonstrate that Pertschuk discussed a legal theory by which the Commission could adopt a rule, if circumstances warranted." Id. at 1174 (emphasis added). Accordingly, the court of appeals concluded that Pertschuk "remained free, both in theory and in reality, to change his mind upon consideration" of the public comments in the particular proceeding. Id. at 1172 (emphasis added).[6]

Indeed, seven independent agencies urged the ANA court to adopt the disqualification standard that it did, stating that a decisionmaker who has an unalterably closed mind on the subject

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[6] Even these general statements by Chairman Pertschuk regarding the legal theory of the FTC to regulate children's advertising were considered by one of the panel judges in ANA to be sufficient grounds for disqualification. When Pertschuk's statements are such that he "commits himself in the public mind, he jeopardizes his ability to make fair determinations and in extreme cases, such as we have here, he should be disqualified from subsequently posing as a fair decisionmaker on the subject of his advocacy." 627 F.2d at 1195 (McKinnon, J., dissenting in part and concurring in part).

"is obviously unable to give meaningful consideration to public comments in an informal rulemaking" proceeding. Brief For Independent Regulatory Agencies at 15 (emphasis added). Thus, the ultimate basis or rationale for the "unalterably closed mind" standard is whether the decisionmaker can give "meaningful consideration to public comments" in the rulemaking proceeding.

WLF submits that the public statements made by Administrator Browner that she "**will not be swayed**" by opposing views, that EPA has "**no other alternative**" but to adopt the proposals, and similar comments on these particular proposals were no mere musings about EPA's general legal authority to review and revise NAAQS for PM-10 and ozone. Rather, those statements express clear and firm views about the very proceeding before the agency in such a way as to suggest that Administrator Browner is unable to give "meaningful consideration to public comments" in this proceeding. While "in theory" Administrator Browner may technically remain free to change her views, the "reality" is that her mind has already been made up in this proceeding, and that she will not consider the alternative of making a decision to retain the current standards pending further necessary review and study.

The court of appeals had another occasion in which to evaluate the bias of an agency decisionmaker in a rulemaking proceeding. In United Steelworkers of America v. Marshall, 647 F.2d 1189 (D.C. Cir. 1980), a challenge was made against Occupational Safety & Health Administrator Eula Bingham for

prejudging a lead exposure rule because of a speech she gave before the Steelworkers that expressed solidarity with the workers, and made references to worker safety and lead exposure. While the Court concluded that Bingham "served her agency poorly by making statements so susceptible to an inference of bias," id. at 1208, the court found that it "must bear in mind" that her remarks on the general issue were made after the comment period closed in the proceeding, 30 days after she formally made her decision, and 10 days after she approved the final language of the regulation. Id. at 1210. The speech came, however, merely five days before the Secretary of Labor finally signed off on the formal rule which was by then, a fait accompli. In addition, the court found that the remarks did not address the "precise" or "specific" issue in the proceeding but rather were "general" expressions of policy. Id. Accordingly, the court did not find the evidence sufficient to find prejudment.

Thus, in both the ANA and Steelworkers case, both the timing of the decisionmakers' comments and the general nature of those comments led the court to conclude that disqualification was not warranted. In sharp contrast to those two cases, Administrator Browner's public remarks were very specific to the instant proceedings and came during the intense public debate on the proposals, before the comment period closed, and before any post-comment hearings were held.

Finally, in Lead Industries Ass'n, Inc. v. EPA, 647 F.2d 1130 (D.C. Cir. 1980), the court of appeals had occasion to

consider the validity of EPA's regulation establishing a NAAQS for lead. In that case, the Administrator adopted the proposed standards on lead but did so on a different basis because he believed that "legitimate questions had been raised [by the comments] concerning the health significance of the early stages of EP elevation and about the threshold blood lead level for this condition." Id. at 1143-44. The court described the Administrator's task in the rulemaking proceeding as requiring both "'a legislative policy determination and an adjudicative resolution of disputed facts.'" Id. at 1146, citing Mobil Oil Corp. v. FPC, 483 F.2d 1238, 1237 (D.C. Cir. 1973).

The petitioner in Lead Industries Ass'n made essentially two prejudgment or bias arguments. First, LIA argued that EPA itself "had prejudged the result from the very outset and was bent on adhering to its original proposal no matter what the evidence showed, the very converse of the fair and impartial rulemakng to which litigants * * * are entitled." Id. at 1162. WLF submits that in these proceedings, it appears that the agency, both through its own statements as well as its Administrator, has appeared to prejudge the PM and ozone issues.

Secondly, and more pertinently, the LIA argued that the final lead rule was flawed due to the participation of Assistant Administrator David Hawkins in the proceeding because of his prior work on lead when he was an attorney at the Natural Resources Defense Council. This second argument itself involved two issues: whether Mr. Hawkins had a conflict of interest, and

two, whether he had prejudged the issue by his prior work at NRDC. The court carefully reviewed Mr. Hawkins' prior work and public statements on the lead issue and concluded that his views were directed to the general issue of whether lead should be listed as a pollutant under the Clean Air Act, rather than to the level at which the standard should be set which was the subject of the rulemaking under challenge in that case. The court noted that while it is to be expected that agency decisionmakers would have "some policy preconceptions,"

> a different question may be presented if it can be shown that an agency decisionmaker has exhibited the type of single-minded commitment to a particular position that makes him or her totally incapable of giving fair consideration to the issues that are presented for decision. This is not, however, such a case. Nothing in the record suggests that Assistant Administrator Hawkins was incapable of considering the issues raised by the lead standards proceedings fairly.

647 F.2d at 1179 (emphasis added).

WLF submits that Administrator Browner's public statements and her characterizations of opposing views while the comment period in these two proceedings was still open suggests "single-minded commitment to a particular position that makes her totally incapable of giving fair consideration to the issues that are presented for decision." The court of appeals used this prejudment test that is applicable to adjudicatory proceedings, which WLF submits is applicable to the rulemaking proceeding in this case which is to resolve both factual and legal questions. In any event, when the LIA court applied the prejudgment test for informal rulemaking enunciated by a divided panel in Ass'n of Nat'l Advertisers v. FTC, namely, whether there has been a "clear

and convincing showing of an unalterably closed mind on a matter critical to disposition of the proceeding," the court concluded that the evidence did not warrant Mr. Hawkins' disqualification, because he had made no public statements about the appropriateness of lead levels, and had "never adverted to [the issues in the proceeding]" in any public statement. Id. at 1176, 1180.

In sharp contrast, the public statements made by Administrator Browner were not limited to expressions of her general views on air pollution, but were specifically directed at the PM-2.5 and ozone rulemaking proposals themselves. Thus, with respect to both the timing of the remarks and their specificity, this case is a significantly stronger case of prejudment than the ANA, Steelworkers, and LIA cases.

CONCLUSION

While a reviewing court would have no trouble concluding that Administrator Browner cannot meaningfully consider public comments in this proceeding because her mind is unalterably closed, we believe it to be in the public interest for Administrator Browner to disqualify herself in the first instance. At a minimum, Administrator Browner, to use the words of the court in Steelworkers, "served her agency poorly by making statements so susceptible to an inference of bias," and on that basis alone, she should be disqualified from this proceeding.

We reserve the right to supplement this petition with additional evidence of Administrator Browner's bias in this

proceeding. We further request that we be informed immediately of any action taken with respect to this petition so that we may consider what further steps may need to be taken to protect the public interest in ensuring fair agency decisionmaking in this proceeding. In addition, WLF respectfully requests that it be permitted to testify at the public hearings to be held in these proceedings. In the interest of administrative economy, WLF further adopts by reference the specific comments of other commenters opposing these proceedings, in particular, the comments of the National Mining Association and the Air Quality Standards Coalition.

Respectfully submitted,

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Mr. BARR. All I am asking, Ms. Browner—and I think you know what I am reading from—page 7, "She states unequivocally that it was a fact that science tells us the standards (including the current PM and ozone standards) are not adequate and we have to move forward." She then concludes with that following quote that I quoted earlier.

Ms. BROWNER. I think they referred to it as a following flourish.

Mr. BARR. They referred to it as a following flourish.

I am not trying to avoid that. What I am trying to do is I am stating that is editorializing as the other word is. I am not focusing on the editorializing, and you know I am not. What I am asking you is, is there anything in the quoted portions of your testimony that they quote on page 7 that is inaccurate?

Ms. BROWNER. This is not testimony. They quote from a speech——

Mr. BARR. Is there anything in the quoted portion of your speech, which is your keynote address to the—I already stated that. I am asking you, focus on this page, please. I am giving you the opportunity. You stated earlier it was out of context or something. Is there anything in your quoted language here that is inaccurate?

Mr. TIERNEY. Mr. Chairman, then I recommend we put the speech in the record and get the matter over with.

Mr. MCINTOSH. We will ask to provide the whole speech.

Ms. BROWNER. I would like to make two points.

I do not have the speech with me. As I am sure all of you can appreciate, there are times when you deliver a speech which has been written by your staff and perhaps by yourself where you say additional things. I in no way can remember giving a lot of speeches, whether or not perhaps something beyond what was written was said, or if something written in a speech was in fact not delivered.

Now, we can ask the organization if they have a transcript. I think it was a speech before the National Children's Health Effects Foundation, and we will be more than happy to do that.

Mr. MCINTOSH. If you could do that and provide the transcript.

Ms. BROWNER. If they have it. I don't know that they have it.

Mr. BARR. I have asked you a very simple question. You have the language before you. Is there anything quoted here from that speech that is inaccurate? If you don't know, say you don't know.

Mr. MCINTOSH. Not based on the speech, but based on the piece of paper there.

Mr. BARR. Just what is in here. That is all I am asking.

Ms. BROWNER. I don't have the speech in front of me.

Mr. BARR. You have the quotes here.

Ms. BROWNER. You are asking me to remember from one of any number of speeches I give. I am more than happy to give you the speech. There is nothing here; but in an effort to be responsive to the questions I will be more than happy to give you the speech. And we will contact the organization to see if they made a copy of what I actually said.

Mr. MCINTOSH. I guess, Bob, are you asking essentially do you stand by the way that quote—that they have reported you saying?

Ms. BROWNER. This was a speech generally about the health of our children.

Mr. BARR. As usual, the chairman very accurately synthesized what I asked. The witness understands what I asked also.

Mr. MCINTOSH. Which is, do you stand by the statement that is quoted there as coming from you?

Ms. BROWNER. I was giving a speech about the health of our children broadly. I stand by my statement as I made it here today that, when it comes to protecting our children, I will not be swayed.

Mr. BARR. We know that. I am asking about the other language here. Does it accurately reflect your views? Are they misquoting you or taking you out of context?

Ms. BROWNER. It is accurate that if the science shows that we have to do more to ensure that our kids are safe—if the science shows us that we must do more to ensure our children are safe from pollution, then that is what we will do.

Mr. BARR. That is not what it says.

Ms. BROWNER. That is what the quote says.

Mr. BARR. It is not. It says, she states unequivocally it was a fact.

Thank you, Mr. Chairman.

Ms. BROWNER. With all due respect, Congressman Barr, that is a quote not from me. It is not even in here presented as a quote from me. It is presented as a quote from a reporter.

Mr. BARR. Are they actually quoting you? Now we are getting somewhere.

Ms. BROWNER. I will give you the speech. I do not nor do I think any of you pretend to understand why a reporter writes something in one way or another way.

Mr. MCINTOSH. We are giving you an opportunity to comment on that.

Ms. BROWNER. You want me to comment on BNA? I am more than happy to. Is that what I am being asked to do?

Mr. MCINTOSH. Did they accurately reflect your views today, I guess would be the useful thing for us to know?

Ms. BROWNER. It is true that the proposals we have made and take public comment on for which we have not reached a final decision are an example of how EPA is considering our children's health first. That is true.

The second sentence says—it is true that the Clean Air Act doesn't allow me to simply conclude a 5-year review with a finding that industry says they have already done everything they can do. What it tells me to do is set a public health standard, and that is what I will do.

Mr. BARR. Mr. Chairman, that is not responsive to my question, but I give up.

Ms. BROWNER. I am more than happy to try again.

Mr. BARR. No, you are not being responsive. That is fine.

Ms. BROWNER. I will try again.

Mr. MCINTOSH. We are running out of time.

Bernie, I have one more question. Do I have another minute, Cindi?

The CLERK. No sir.

Mr. MCINTOSH. Do you want to go next?

Mr. SANDERS. Whatever. If you want to continue this, we will go.

Mr. MCINTOSH. I have got one other question, and that is, if Harvard or HEI and the American Cancer Society do produce the underlying data on those studies, will EPA agree to make them available to this committee in a form that redacts personal information, such as names and information that is not related to the study——

Ms. BROWNER. Mr. Chairman, as you well personally know, I have a long history of giving you everything I have that you ask for; and I will do it again.

Mr. MCINTOSH. Thank you.

Ms. BROWNER. Everything I have is yours. We have given you I think pages on this, and we are more than happy to give you any other pages that will be helpful. Absolutely.

Mr. MCINTOSH. I will enlist your effort once again; and I know you have written letters, go back and ask them to provide that to the Agency; and we are going to take some independent steps to do that as well.

Let me just, 30 seconds, conclude and say I agree with Bernie that we do have to help people who suffer from respiratory diseases and that all of us share the goal of clean air, and that one of the concerns that I have—and, frankly, this hearing has exacerbated that concern—is that we may end up not meeting that goal in a timely manner by not fully going through these procedural requirements that would then preclude certain lawsuits.

I would urge the Agency to start immediately, particularly with the Regulatory Flexibility Act and the Unfunded Mandate Act, to do those analyses for the final rulemaking in a way that will comply with those standards set forth in those two statutes so that we can protect people who suffer from those respiratory diseases.

Let me now turn it back to you, Bernie.

Mr. SANDERS. I hope that you will be quote-unquote liberal for a moment in terms of the amount of time that we have and give Mr. Tierney a chance.

Mr. MCINTOSH. I will. Don't quote me on being liberal, though. I will get into trouble.

Mr. SANDERS. Just within a limited context.

Mr. KUCINICH. Social.

Mr. TIERNEY. I am almost inclined to let you off the hook. You have endured a lot. Let me ask a couple of questions.

I assume that you and all of the legal talent in your power have made a pretty good determination that you have done all of the procedural things you need to do; and you feel quite certain that, whatever the challenge may be, you have done all you can do as a very practical matter as well as a legal matter?

Ms. BROWNER. I believe we have complied with not only the letter of the law but also the spirit of the law in each and every instance.

Mr. TIERNEY. I have spent 20 years in small business and representing small businesses, and I think that this is—you know, to my knowledge, small business is always willing to step up and participate in a public-private sort of relationship. All of the people I represented basically fall into that category, whether it was my term on the Chamber of Commerce or my representation of them individually.

It would seem to me at the next level, after you determine what is the standard, at the next level would be the time to call upon those people to work with you and with the local State Governors to determine just what is the way of implementing whatever standard it is that gets determined. Is that a fairly simple proposition?

Ms. BROWNER. You got it. That is absolutely the way we would handle this.

Mr. TIERNEY. The second part of that is you would engage small businesses at that point in time——

Ms. BROWNER. Yes.

Mr. TIERNEY [continuing]. As would, hopefully, the local governments do that and take all of their concerns and ideas into consideration?

Ms. BROWNER. In fact, there is already a dialog about how we might find the most common-sense, cost-effective solutions.

Mr. TIERNEY. Is that part of your subcommittee group that gets together?

Ms. BROWNER. Yes, the Federal Advisory Group.

Mr. TIERNEY. That is ongoing——

Ms. BROWNER. With small business representatives.

Mr. TIERNEY. A large number of people?

Ms. BROWNER. You can't get them in a room.

Mr. TIERNEY. You may not want to.

Ms. BROWNER. No, it is great. Very thorough.

Mr. TIERNEY. Let me focus on one last question I have.

I share a northeast residence with Mr. Sanders. We always have that concern that just before things go out to sea, they stop by and visit us. We have a great deal of tourism and other industries that would really require as well as benefit from clean air. These same committees that you now have that are dealing with small businesses, it is my understanding they are also dealing with the transference issue?

Ms. BROWNER. Yes, there is a committee looking at the transport issue. That is correct.

Mr. TIERNEY. Can you tell me a little bit about what the committee's charge is and what might result from their work so we might have some comfort to know we are going to get this matter addressed and something is going to result from that?

Ms. BROWNER. Again, because the actual plans for pollution reduction largely fall to the Governors, what the State representatives are now doing is, one, coming to a better understanding of the source of the problem. There is a lot of modeling that has been going on to understand who really generates the lion's share of the problem, if you will, in terms of the transport issue.

Once that process is concluded, it is a complicated process. Then they hope to turn toward control strategies. What are the actual steps that would be taken in individual States by industries who have certain levels of pollution to the public air? What are the steps that would be taken to reduce the levels of pollution?

Mr. TIERNEY. Is it anticipated that when the EPA gives final approval or disapproval of any particular State's proposal that how they have addressed this transference issue will come into play as to whether or not they get approved?

Ms. BROWNER. Yes.

Mr. TIERNEY. It will have an effect as to whether or not they reduced it sufficiently in their own State but also how their plan takes consideration for States like Vermont and Massachusetts for the downwind?

Ms. BROWNER. That is a factor, yes.

Mr. TIERNEY. I thank you for your patience and the hard work you are doing.

Ms. BROWNER. Thank you very much. If I might make—I thought you were done.

Mr. SANDERS. Go ahead.

Ms. BROWNER. No, go ahead.

Mr. SANDERS. I would just at this point want to thank the chairman. I know, obviously, there are a few minor differences of opinion here; but I thought it was a productive and good hearing; and I think you did a good job in producing it.

I would appreciate if we could leave the record open. I would like to put in the record an article by Henry Waxman in the same issue of Roll Call that Mr. Barr referred to.

Mr. MCINTOSH. Seeing no objection, gladly.

[The article referred to follows:]

ROLL CALL
THE NEWSPAPER OF CAPITOL HILL SINCE 1955
VOL. 42, NO. 77 MONDAY, APRIL 21, 1997 $3.00

Don't Believe Industry Hit On EPA's Clean Air Standards

"Each law can be reduced to a single phrase. For the Internal Revenue Code it is the collection of taxes. For the Clean Air Act, it is the protection of public health. Removing health from the Clean Air Act would be like removing taxes from the Internal Revenue Code. Yet, that is exactly what some groups wish to do...."

— Sen. Robert Stafford (R-Vt), chairman of the Senate Committee on Environment and Public Works, 1981

By Rep. Henry Waxman

Stafford's warning cuts to the heart of the current attack against the Environmental Protection Agency's proposals to protect the public from ozone and particulate air pollution. As most Members of Congress are now aware, the nation's biggest polluters have pooled their resources to form the Air Quality Standards Coalition to block the EPA. But this multimillion-dollar lobbying campaign isn't just about the agency's new proposals. Its ultimate goal is to destroy the Clean Air Act's fundamental underpinning by eliminating health-based standards.

Under the Clean Air Act, the EPA must ensure that the current health-based air quality standards reflect the best scientific information available. This has been the law for more than 25 years.

In carrying out this mandate, the EPA recently completed an analysis of thousands of studies on ozone and particulate air pollution. Based on its study, the agency concluded that new scientific information requires stronger protections of public health.

Specifically, the EPA has proposed to change the form and level of the ozone standard from 0.12 parts per million (ppm) measured over one hour to 0.08 ppm measured over eight hours. This standard would better protect asthmatic children, while creating a more stable standard so that areas don't slip in and out of compliance. For particulate matter, the EPA has proposed establishing a new standard for fine particulate matter (particulate matter 2.5 microns in size and smaller). This standard would focus on the tiny particles resulting from burning fuel — the most harmful type of particulate air pollution.

Rep. Henry Waxman (D-Calif) is a member of the Commerce subcommittee on health and environment.

The EPA's scientific basis and staff work has been reviewed extensively by a group of independent scientific advisers called the Clean Air Scientific Advisory Committee (CASAC). Often lost in the inflamed Congressional rhetoric about the new EPA proposal is the most essential point: CASAC's members agreed that the EPA did its scientific homework for both standards. CASAC concluded that the EPA had an "adequate scientific basis for regulatory decisions."

In fact, EPA Administrator Carol Browner recently testified that "this has been the most extensive scientific review and public outreach process ever conducted by EPA for public health standards." Each of the 5,000 studies the EPA reviewed had already been peer-reviewed and published in scientific and medical journals.

There is also strong international support for tougher air pollutant standards. Britain, Canada, and the World Health Organization have all recognized the serious public health implications of fine particulate matter air pollution. As for ozone, Canada's standard and the World Health Organization's recommended standard is 0.06 ppm.

Health-based standards are a primary reason that the Clean Air Act is one of the most effective governmental initiatives of this century.

The EPA's proposed fine particulate matter standard would prevent 15,000 premature deaths a year. The new ozone standard would reduce hospital admissions by 1,600 admissions and reduce emergency room visits by 5,000 visits each year. It will reduce serious respiratory problems in children by 250,000 cases each year.

Industry ignores these facts and has instead issued perennial warnings of impending doom if tighter standards are adopted — we are told that family barbecues, lawnmowers, and Fourth of July fireworks will only be memories if the EPA moves forward.

Industry has also tossed charges of bias and bad science into the mix and gives every sign that it wants to refight the battle on health-based standards it waged and lost years ago.

When the effort to reauthorize the Clean Air Act began in 1981, few of us anticipated that it would last for nine years and culminate in the 1990 Clean Air Act. The battle to retain health-based standards was fought early and hard.

At the outset, industry rallied the cry for repeal of the Clean Air Act's health-based standards and to replace them with standards based on industry's cost projections.

The response was instructive. President Ronald Reagan, Members of Congress, environmental groups, states and localities, and even some industries ultimately chose to favor health-based standards. By the end of 1981, any hope the industry had for a cost-based approach faded, and the 1990 Clean Air Act ultimately retained health-based standards.

Looking back, it's obvious that if we had adopted an approach based on cost projections — especially industry cost projections — we would have crippled the progress we have made in cleaning the air.

For instance, in 1979 — the last time the EPA set a standard for smog — the American Petroleum Institute predicted that "extreme social and economic disruption" would follow and that "impossible" controls would be imposed across the country. General Motors warned Congress of "widespread inflation and employee layoffs."

The EPA adopted the rule and industry's gloomy predictions proved to be wrong.

As Congress considered the 1990 Clean Air Act, every affected industry weighed in. The auto industry flatly stated that tougher tailpipe requirements would be impossible to meet. Mobil predicted that cleaner gasoline standards would result in major supply disruptions and dramatic price increases. And DuPont reprised the always apt "economic and social disruption" warning in lobbying against a phase-out of ozone-depleting substances.

The utility industry joined in, predicting that acid rain controls would cost $1,500 per ton of cleanup, and industry's main trade group estimated the entire law would cost nearly $100 billion a year.

Our clean air program would have been thrown into gridlock if these exaggerated claims had dictated the law.

In reality, since enactment of the 1990 law, cleaner cars have been manufactured ahead of schedule, cleaner gasoline has been introduced to the market without price or supply problems, DuPont invented new substances (ahead of the law's schedule) that don't harm the ozone layer, and acid rain is being cleaned up at prices 94 percent under utility estimates. Overall, the 1990 law is costing approximately $22 billion, or just 25 percent of what industry predicted.

Indeed, health-based standards are a primary reason that the Clean Air Act is one of the most effective governmental initiatives of this century. Not only have major air pollutants decreased nationally by 30 percent over the past 25 years, but during the same period our gross domestic product increased almost 100 percent, population rose by 28 percent, and vehicle miles traveled increased 116 percent.

The Clean Air Act works because while the standards are based solely on health considerations, costs are explicitly considered in establishing compliance schedules and choosing clean-up options. That means we have a clear sense of what is needed and a commonsense plan to achieve it.

The current health standards are outdated and are no longer supported by modern science. We know that tens of thousands of people are dying and hundreds of thousands more suffer from illnesses caused by commonly found levels of particulate matter and ozone in the air at levels that are currently mislabeled as "safe."

Congress has a responsibility to make sure we don't accept industry arguments at face value. We need to scrutinize them in light of industry's wildly inaccurate previous projections and the overwhelming scientific evidence the EPA has compiled in support of its new standards.

When that is done, it's clear that instead of weakening the act or blocking the EPA's work, Congress should be working to help public health experts get on with the job of making sure every American — no matter how old or young, healthy or sick — breathes safe air.

Mr. SANDERS. There are some statements from the State of Vermont and other State officials I would like to include in the record.

Mr. MCINTOSH. We will include those.

Mr. SANDERS. I wanted to thank Ms. Browner. You have been here for a long time. Thank you very much, you and your staff. I thank the staff of your committee as well and our staff.

Mr. MCINTOSH. Thank you Mr. Sanders, both you and your staff have been a great help to us.

Ms. Browner, you wanted to say something?

Ms. BROWNER. I wanted to say my thanks to all the members of the committee. This is not a small issue. It deserves vigorous discussion. I think we have rightfully engaged in that here today, and I appreciate it.

I want to be very clear: We have not made a final decision. We do not consider ourselves above the law. It is true that almost anything I decide will be subject to litigation. That is the nature of the business I do on behalf of the American people. It is unfortunate.

There will be some in industry who, quite frankly, want to delay their responsibilities to reduce their pollution. That has been true previously; and, unfortunately, it will continue to be true in the future.

It is not all industry, by any means. So I don't make my ultimate decision in this or any decision based on whether or not I will find myself in court. I will find myself in court, rest assured. It is the nature of what I do.

I make my decision based on the science. I make my decision based on the law. And I hope that these suggestions that somehow or another I am acting in an illegal manner, that I have acted outside the confines of the law, have been addressed today.

I do believe as part of my job as the head of the country's environmental Agency I have an obligation to speak out to the American people, to report to them on what the science shows us and what the law requires me to do. That is all I have attempted to do in giving any speech at any time in my tenure.

I don't think anyone here attempts to or seeks to intimidate me or in any way stop my obligation to do that. I do that within the meaning of my job, Administrator of the Environmental Protection Agency for the American people.

Thank you.

Mr. MCINTOSH. Thank you, Ms. Browner. We do share the goal of reducing and eliminating unnecessary air pollution in our country and protecting the health of American citizens, but have some very serious concerns that we are increasing the legal exposure that could inadvertently—I am sure it was not intended—but set back that goal.

Thank you very much for coming. I appreciate it.

[The letter referred to follows:]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 31, 1997

THE ADMINISTRATOR

Honorable Bob Miller
Governor of Nevada
Carson City, Nevada 89701

Dear Governor Miller:

Thank you for your letter of December 19, 1996. In your letter, you requested on behalf of the National Governors' Association and others, that the public comment period for the proposed revision to the national ambient air quality standards for ozone and particulate matter be extended for 60 days.

I am committed to reviewing these important public health and environmental standards for the American people in a timely manner. I also recognize that it is critical for the American people to have a thorough, fair and informed public debate on the EPA proposal. To this end, I recognize additional time is needed to responsibly assess and comment on our proposal. Therefore, I am informing you that EPA intends to ask the Court to modify its schedule for the review of these standards by extending the public comment period by 60 days, and by extending the date for promulgation of these standards by 60 days as well.

I look forward to continuing to work with the nation's Governors to ensure healthy air for the people of our nation.

Sincerely yours,

Carol M. Browner

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Mr. MCINTOSH. Let me call forward the final panel in this hearing. We have with us the Honorable Sally Katzen, who is the Administrator of the Office of Information and Regulatory Affairs; the Honorable Jere Glover, who is the Chief Counsel for Advocacy of the U.S. Small Business Administration; and remaining with us will be the Honorable John Cannon, the General Counsel of the Environmental Protection Agency. Thank you all for coming.

Let me say welcome to you. I understand you were at another committee.

Ms. KATZEN. Another subcommittee of this committee.

Mr. MCINTOSH. Let me ask each of you to please rise; and, as I explained earlier, don't take this personally. It is our policy of our committee and subcommittee to swear in each of our witnesses.

[Witnesses sworn.]

Mr. MCINTOSH. Please let the record show that each of the witnesses answered in the affirmative.

STATEMENT OF SALLY KATZEN, ADMINISTRATOR, OFFICE OF INFORMATION AND REGULATORY AFFAIRS, OFFICE OF MANAGEMENT AND BUDGET

Mr. MCINTOSH. Our first witness on this panel is someone whom I have admired greatly in the effort to make sure that we use the correct procedures. She has worked long before joining the administration in that effort in the legal community in writing regulations, and I admire her efforts to continue the tradition of ensuring that we do as good a job as possible in ensuring that we minimize the costs and maximize the benefits to society of regulations that are produced in our Government.

So let me now—Sally, I call on you to share with us your testimony. The entire written testimony will be put into the record. Feel free to summarize it or expound on other points if you would like.

Ms. KATZEN. Thank you very much, Mr. Chairman, particularly for that gracious introduction.

Members of the subcommittee, it has been a long morning. Actually, it is now early afternoon.

You have asked us to appear today to discuss EPA's proposals to revise the ozone and particulate matter ambient air quality standards. As is painfully clear, these proposals have sparked an enormous amount of interest from a wide variety of affected groups. Indeed, in my experience as Administrator of OIRA, there has been no other rulemaking proceeding that has attracted as much attention or interest.

I am also acutely aware of the questions that have been raised about OMB's review of these proposed rules under Executive Order 12866, from the logistics of how and when we conducted the review to the substance of what we thought of the proposed rules and the accompanying economic analyses that EPA prepared.

Your first panel this morning consisted of the testimony of the Administrator of EPA, which I think is fully appropriate. Under the Executive order, the Agency which has the statutory authority bears the responsibility for developing the substantive regulatory standards. OIRA's role is to provide dispassionate, objective review of the agency's work in light of the Executive order. Among other

things, our task is to ensure that the regulatory agency asks the right questions, considers the relevant scientific and other data, employs sounds analysis, and balances the competing concerns in a reasonable, practical way.

Executive Order 12866 sets forth a number of principles generally applicable to regulatory decisionmaking. It was, however, purposely qualified to apply, and I am quoting, to the extent permitted by law, close quote.

That qualification is particularly important for these proposals for, as the EPA Administrator has testified, the Clean Air Act requires her to set primary air quality standards that "protect public health with an adequate margin of safety." These standards, therefore, are health-based; and the EPA Administrator is not to consider economic factors in determining the appropriate standard.

Nonetheless, the Executive order requires the agency to prepare economic analyses for proposed and final rules and submit them to OIRA for review, even if economic considerations cannot be a determining factor—or any factor—in formulating the proposal.

In accordance with Executive Order 12866, EPA prepared extensive cost-benefit analyses—over 3 inches of material—for these standards. That step is important because, while the standards themselves are health-based and may not reflect economic considerations, they are not, as you heard this morning, self-executing. Instead, after the standards are set, EPA must issue implementation policies or regulations that provide for the achievement of these standards by the States.

As a result of EPA's preparing the economic analyses during the standard-setting phase, those addressing implementation issues—EPA, its advisory committees, State and local governments who are responsible for implementing the standards, and all of those affected—would likely have the best information available as they do their work.

Turning briefly to the specifics of OMB's review of these proposed standards, you have inquired about this in a series of letters. Before we received the proposed standards, OIRA's staff attended a number of meetings at which EPA explained in general terms the methodology it was using in its analysis of these rules.

The proposed rules themselves arrived on November 4, 1996, leaving us approximately 3 weeks available for review. During that time, my staff worked intensively, late into the evenings and on weekends. Because they were proposed rules, our task included assuring that the regulatory option preferred by the agency is fully explained and that other appropriate regulatory options are set forth with sufficient clarity to permit the public to provide meaningful comments during the public comment period.

We had the same objective with respect to the accompanying economic analyses, namely to ensure that the agency provides sufficient and accurate information on the estimates of benefits and costs to permit the public to provide meaningful comment.

In your letter of invitation to this hearing, you asked that I address OMB's position on EPA's compliance with the Regulatory Flexibility Act. My response, again, was included in written materials that I submitted to you.

Simply stated, the regulatory agency has the front-line responsibility for complying with the act; and Congress has given the SBA Chief Counsel for Advocacy the responsibility for monitoring agency compliance with that act. OMB has no separate opinion on this issue.

I would be happy to answer any questions that you have on these or other matters, and I thank you again for the opportunity to appear before you again.

Mr. MCINTOSH. Thank you very much, Sally. I appreciate that. We will indeed have some questions.

[The prepared statement of Ms. Katzen follows:]

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

ADMINISTRATOR
OFFICE OF
INFORMATION AND
REGULATORY AFFAIRS

STATEMENT OF SALLY KATZEN
ADMINISTRATOR
OFFICE OF INFORMATION AND REGULATORY AFFAIRS
OFFICE OF MANAGEMENT AND BUDGET
BEFORE THE
SUBCOMMITTEE ON NATIONAL GROWTH, NATURAL RESOURCES,
AND REGULATORY AFFAIRS
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
U.S. HOUSE OF REPRESENTATIVES

April 23, 1997

Mr. Chairman, Members of this Subcommittee. You have asked me to appear here today to discuss EPA's proposals to revise the ozone and particulate matter (PM) ambient air quality standards (NAAQS). These EPA proposals have sparked enormous interest from a wide variety of affected groups -- environmentalists and health professionals, who view these standards as a necessary and important step to improving public health; the State and local governments, who have the front-line responsibility for implementing these standards; and industry and other entities, who will have to take the steps necessary so that areas are able to attain the proposed standards. Their interests and concerns range from the adverse health effects to be ameliorated by these standards -- and the scientific support and other science policy issues underlying these standards -- to the administrative and other practical means by which these standards will be implemented, to the economic effects of complying with these standards -- the opportunity and other costs incurred by those who will have to change their conduct to achieve these standards.

In my experience as Administrator of the Office of Information and Regulatory Affairs (OIRA) in OMB, there is more public interest in these two proposals than in any other rulemakings. And I am acutely aware of the interest and questions that have been raised about OMB's review of these proposed rules under Executive Order No. 12866 --

from the logistics of how and when we conducted the review, to the substance of what we thought of the proposed rules and the accompanying economic analyses that EPA prepared.

The EPA Administrator is also appearing today, and her testimony describes in detail the basis for the proposed standards. Under the Executive Order, the agency, which has the statutory authority, bears the responsibility for developing substantive regulatory standards. OIRA's role is to provide dispassionate, objective review of the agency's work in light of the Executive Order. Among other things, our task is to assure that the regulatory agency asks the right questions, considers the relevant scientific and other data, employs sound analysis, and balances the competing concerns in a reasonable, practical way.

Executive Order 12866 sets forth a number of principles generally applicable to regulatory decision-making. It was, however, purposefully qualified to apply "to the extent permitted by law." That qualification is particularly important for these proposals. Under the Clean Air Act, the EPA Administrator is to set primary air quality standards that "protect public health with an adequate margin of safety." These standards, therefore, are health-based, and the EPA Administrator is not to consider economic factors in determining the appropriate standards.

The Executive Order nonetheless requires agencies to prepare economic analyses for proposed and final rules and to submit them to OIRA for review, even if economic considerations cannot be a determining factor -- or any factor -- in formulating the proposal. Where, as here, a statute precludes the consideration of economic factors, such analysis is still important because it helps to inform the Administration, Congress, and the public of the benefits and cost of regulatory actions.

In accordance with E.O. 12866, EPA prepared extensive benefit-cost analyses -- over three inches of material -- for these proposed standards. These analyses included ambitious and sophisticated modeling efforts based on inventories of known emissions sources in which the agency attempted to identify, for various geographic areas, the most efficient set of control measures for attaining the standards, the costs of these measures, and the extent of air quality benefits that would be achieved. Projected air quality improvements served as the basis for an assessment of some of the potential health benefits, which were monetized by assigning dollar values to reductions in the risk of each outcome.

It was important that EPA prepared these economic analyses, for while the standards themselves are health-based and may not reflect economic considerations, they are not self-executing. Instead, after the standards are set, EPA must issue implementation policies or regulations that provide for the achievement of these standards. In the ordinary course, this would include specifying how to determine whether localities are or are not in attainment, the timing for achieving attainment, guidance on control strategies to achieve attainment, and sanctions for failure to submit plans or achieve attainment. In these implementation phases, costs should and will play a very significant role. As a result of EPA's preparing the economic analyses during the standard-setting phase, those addressing implementation issues -- EPA, its advisory committees, the State and local governments who are responsible for implementing these standards, and all those affected -- will likely have the best information available as they do their work.

Let me now discuss the specifics of OMB's review of these proposed standards. Before we received the proposed rules, OIRA staff had attended a number of meetings at which EPA explained in general terms the methodology it was using in its analysis of

these rules (e.g., data, assumptions, models, etc.). In addition, EPA and OIRA staff had hosted a number of interagency meetings with EPA staff briefing other Federal agencies on the general issues surrounding EPA's review of ozone and particulate matter standards.

EPA submitted the proposed rules on November 4, 1996. We had to work quickly because of a court-ordered deadline to issue the particulate matter standard by November 29, 1996. Although there was no court-ordered deadline for the ozone standard, EPA thought it important to publish the two proposals simultaneously. This would allow the regulated community and other interested entities to evaluate each of the proposals with the other in mind and to consider how the two proposals would interact.

During these three weeks available for review, my staff worked intensively, working late into the evenings and weekends. The shortness of time undoubtedly put a strain -- both on my staff and on EPA's as well. Because these were proposed rules, our task included assuring that the regulatory option preferred by the agency is fully explained, and that other appropriate regulatory options are set forth with sufficient clarity to permit the public to provide meaningful comments during the public comment period. We had the same objective with respect to the accompanying economic analyses -- namely, to assure that the agency provides sufficient and accurate information on the estimates of benefits and costs to permit the public to provide meaningful comments.

In the Chairman's March 28, 1997, letter of invitation to this hearing, he identified several areas of interest, in addition to OMB's role in reviewing the proposed rules. He specifically asked that I address OMB's position on EPA's compliance with the Regulatory Flexibility Act. I was asked this question by the Chairman in his January 17, 1997, and March 10, 1997 letters, to which we responded on February 11, 1997 and April

4, 1997. As I described in my written responses, EPA stated in the preambles to both of its proposed standards that they would not have a significant economic impact on small entities within the meaning of the Regulatory Flexibility Act because the proposals would establish standards of air quality; that the requirements necessary to achieve these standards would be set forth in future implementing policies or regulations; and these later regulatory actions would have an effect on small entities, and so the Regulatory Flexibility Act would apply to these later regulatory actions. I further pointed out in my earlier responses that the SBA Chief Counsel for Advocacy is the official charged with monitoring agency compliance with that Act; and that it is my understanding that at no time during the Act's 17-year history has OIRA adopted a practice of making individualized determinations regarding a rule's compliance with the Act. Thus, given these factors, OMB's position on EPA's compliance with the Regulatory Flexibility Act in these rulemakings is as stated by EPA and SBA; OMB has no separate opinion on this issue.

Thank you for the opportunity to appear here today. I welcome any questions of these or other aspects of our review of the proposed rules.

# # # # #

Mr. MCINTOSH. Let me turn now to our second witness on this panel, Mr. Jere Glover, whose opinion on this has been discussed greatly, so we will now hear from you on your testimony.

As I mentioned, your full remarks will be put into the record. If you wanted to amplify any of the points discussed earlier as well——

STATEMENT OF JERE GLOVER, CHIEF COUNSEL FOR ADVOCACY, U.S. SMALL BUSINESS ADMINISTRATION

Mr. GLOVER. Thank you, Mr. Chairman. I would like to thank you very much for having this hearing.

What I have found as chief counsel is, quite often, these hearings have a tremendously salutary effect on agency compliance. Merely the fact you are having the hearing and caring about small business and looking at this issue has a very good ripple effect throughout the Federal agencies. I think that is going to be particularly true here, and I will share with you some comments and meetings that I had with EPA just yesterday and some results of that.

Before I do that, let me first say that with me today is Kevin Bromberg, the Assistant Chief Counsel for the Environment. He is representing one of the hardest working, most dedicated groups of employees in the Government; and I am pleased to be head of the Office of Advocacy and work with these fine individuals.

As you may know, the Office of Advocacy is an independent office charged with representing the views of small business before State, Federal and even before Congress.

Several Presidents and a number of Congresses have attempted to change the culture within the Federal Government and how it treats small businesses. A number of pieces of legislation have been passed trying to do that.

First, the legislation creating the Office of Advocacy some 20 years ago; shortly thereafter, the Regulatory Flexibility Act was passed; the Equal Access to Justice Act has been passed; the American Paperwork Reduction Act has been passed and a couple of years ago amended; and of course now, SBREFA.

By and large, those attempts to change the way the Government deals with small business have not been as successful as any of us would like them to be. Hopefully, the SBREFA legislation will be more successful.

I think that sometimes I look at chief counsel and I feel like Rodney Dangerfield, that I just don't get any respect, and I often compare the previous activities of the office as the age-old question of if a tree falls in a forest and there is no there to hear it, does it make a sound? Sometimes I find myself thinking, well, gee, is that the case?

Well, with SBREFA, I think we are going to see some changes; and I think we already are beginning to see small business and even the Office of Advocacy getting some more respect.

In this regard, let me just say we have done a lot of outreach on SBREFA. We have had training sessions with Government officials. We had over 600 Government officials attend Office-of-Advocacy-sponsored training sessions, and over 200 trade association executives have done that. So we have been making sure that the word gets out.

And I think perhaps that we have been working with industry very closely to make sure they understand this new law, and it really is going to change the way the Federal Government deals with small business.

The judicial review provisions that are now in the Regulatory Flexibility Act are there and are going to be used, hopefully not very often. Hopefully, we will get some clear law very soon; but we will see.

Turning specifically to EPA, reviewing the annual reports that have been filed by the previous chief counsels and the ones that I filed, EPA has generally done a good job of complying with the Regulatory Flexibility Act. However, of course, EPA varies from office to office and from regulation to regulation.

Yesterday, I attended the first panel meeting for the off-the-road diesel regulations. Let me tell you, that proves that the panel process can work, an agency can do a good job. Not only have they looked at the implications of the industry, they paid special attention to small business. They have gone out of their way to look at the competitive issues. They have done an extremely good job of considering what they were proposing to do, how they were doing it, looking at alternatives, looking at ways they could make it better for small business. I was genuinely pleased that the process worked so well.

Given the general history of Mary Nichols and the Air Office and their willingness to work with us and work closely on developing regulations, I was obviously shocked when I saw the certification in this particular case that indicated that they did not believe that the regulation would have a significant impact on a substantial number of small businesses.

We obviously, when we heard that was going on during the regulatory process, alerted them that we were concerned about that, that we disagreed with them. You have before you our letter where we spelled out in some detail our reasons as to why we believed that was the case.

We will concede that this is an issue that reasonable people can disagree on. However, I would tell you that the Office of Advocacy feels strongly that it is our position that a regulatory flexibility analysis should have been done in this matter, and certification was not appropriate.

Having said that, I did meet yesterday with Mary Nichols; and we had a very good conversation about some things. One of the things I wanted to explain was how we have not been successful in the past in getting EPA to have the States understand what has been going on in the regulatory environment in Washington. Not only has the President but this Congress has done a number of things that I think changed the way the Government treats small business in a regulatory environment. That message hasn't gotten through to the States.

We met with EPA and with OSHA, and OSHA did agree to meet with their State representatives and their State counterparts and encourage them to move toward more sensible enforcement activities for small business. EPA has now agreed that they will do likewise when they bring in their State counterparts, State officials, that they are going to have us sit down with those people, explain

to them how their rules, regulations and enforcement policies could be unfair to small business and how they need to take small business into consideration.

I think that is one of the things that is going to flow from this.

I think another thing that is going to need to be done is any implementation regulations that are going to flow from this have got to make sure that we educate the Governors. We have recognized that that is one of the places we hear the most complaints from, is that State and local officials just don't know or care about small business.

While we have been able to make small businesses' view heard here in Washington, we have not been able to do that with some of the others. That is why, when we say it is going to be on the Governors, it increases our burden of educating the Governors as to how these regulations should be impacted and how they should be proposed to help small business.

I would be happy to answer any questions. I want to sincerely thank you for having this hearing. It has already had a good effect.

Mr. MCINTOSH. Thank you. We will explore further this notion that it is all going to fall to the Governors.

[The prepared statement of Mr. Glover follows:]

Good morning, Mr. Chairman and members of the committee. My name is Jere W. Glover. I am Chief Counsel for Advocacy with the Small Business Administration (SBA). Before proceeding to my testimony, I wish to note that the views expressed here are my own and do not necessarily reflect the views of SBA or the Administration. With me today is Kevin Bromberg, Assistant Chief Counsel for environmental policy.

Office of Advocacy's Role

The Office of Advocacy was established 20 years ago by Congress to be an independent voice for small business within the policy making bodies of government. The Chief Counsel, by law, must be appointed from the private sector (15 USC § 634a). Having served both in government and the private sector, having helped form several small businesses and having served on the corporate boards of several small businesses, I bring first-hand experience to my current position – namely, how small business views regulations and copes with the regulatory process.

Congress has struggled for years to determine how to address the problem of regulatory burdens on small business; how to make agencies consider the value of small business to the economy; and, how to get agencies to solve public policy issues by getting to the root cause of problems without imposing "one size fits all" regulatory solutions, but, instead, customizing solutions that maximize impact and compliance.

In an effort to address this concern, Congress established the Office of Advocacy 20 years ago with the mandate to serve as "a focal point for the receipt of...criticisms and suggestions concerning the policies and activities of...any...Federal agency which affects small business..." (15 USC § 634c). Congress recognized that small businesses do not

have the resources to represent their interests at the national level. To help equalize the process and to ensure balanced input from all sectors, the Office of Advocacy was established to represent the interests of small business and to collect small business data and information for regulators to consider during the regulatory process.

This was only the first step. In response to recommendations from the 1980 White House Conference on Small Business, Congress enacted the Regulatory Flexibility Act (RFA) (5 USC § 601 et seq.). This law was intended to institutionalize an analytical process that considers regulatory alternatives and measures the regulatory impacts on small business. The law also requires agencies to document, in the public record, their regulatory analyses for public comment. The Office of Advocacy was charged with the important task of monitoring agency compliance with the law. Also in that year, the Paperwork Reduction Act (44 USC § 35 et seq.) was passed, which forced agencies to focus on the reporting and paperwork burden imposed by regulations. This law was amended and strengthen in 1995 (P.L. 104-13).

Small Business Regulatory Enforcement Fairness Act

As evidence surfaced that these laws were not having the intended salutary impact, Congress enacted the Small Business Regulatory Enforcement Fairness Act of 1996 (P.L. 104-121), which established new procedures to ensure small business involvement in regulatory development and gave small business a new weapon –judicial review of agency compliance with the Regulatory Flexibility Act. This change was long sought by small businesses and was in direct response to a recommendation of the 1995 White House Conference on Small Business.

Until recently, the Office of Advocacy was like a tree that falls in the forest – the sound unheard and the falling unnoticed. Comments submitted to regulatory agencies by the Office of Advocacy on regulatory proposals often went ignored. Some agencies complied fully with the Regulatory Flexibility Act. Others failed to comply, and still others simply ignored it. The vast majority of agencies inconsistently complied. The compliance problems with the law have been documented in Advocacy's annual reports to Congress on the RFA.

The enactment of the Small Business Regulatory Enforcement Fairness Act (SBREFA) seems to have changed agencies' attitudes. SBREFA made an important amendment to RFA by allowing judicial review of agency compliance with the law, and it reinforced the Office of Advocacy's authority to file *amicus curiae* briefs in court appeals. As a result, agencies are becoming more aware of the Office of Advocacy's role and of the importance of small businesses in regulatory development. We have witnessed new interest in our views and are experiencing increased requests for consultation.

Some of this new visibility is due, in part, to the efforts the Office of Advocacy to ensure agency awareness of SBREFA. We held a series of seminars last year with over 600 Federal officials discussing SBREFA. We have also held special meetings with the Federal Communications Commission, the Department of Labor, the Department of Agriculture and the National Oceanic and Atmospheric Administration, among others. Advocacy also hosted a special briefing for agency economists; SBREFA has elevated the importance of data to the entire process—data on small business industry structure and data on regulatory impacts.

Furthermore, we have not ignored our constituency in the private sector. We held an initial meeting with the leadership of small business trade associations upon passage of SBREFA, providing them with a guide to the law. Currently, we are holding forums with trade association staff to discuss how their members can use the law to ensure small business participation and representation in the regulatory process.

On an ongoing basis, Advocacy consults with small businesses through roundtable meetings to discuss procurement, environment, telecommunications, taxation, employee and industrial safety, specific regulatory proposals, small business concerns, etc. We also maintain regular communications through conference calls with a network of delegates to the 1995 White House Conference on Small business.

Small Business Advocacy Review Panels

An important focus of today's hearing is on a special provision of SBREFA— Section 244 which requires Small Business Advocacy Review Panels to be convened by the Occupational Safety and Health Administration (OSHA) or the Environmental Protection Agency (EPA). By way of background, before either of these agencies publish the proposed rule that is expected to have a significant economic impact on a substantial number of small entities, they must notify the Chief Counsel for Advocacy of the potential impacts of a proposed rule on small entities. The law spells out a process that these two agencies are to follow in order to consult with and solicit comments from small entities that would be affected by the rule. Part of that process is the convening of a panel consisting of the agency's Chairperson and staff, the Chief Counsel for Advocacy and the Office of Information and Regulatory Affairs of the Office of Management and Budget.

The panel is required to review materials furnished by the agency to small entities, "collect advice and recommendations of each individual small entity representative...", and within 60 days develop a report for the public record as to the "...comments of the small entity representatives and its findings..." These finding will include information such as the number of entities affected, the reporting requirements of the proposal, and possible overlap or conflict with other regulations. Importantly, the findings also must address regulatory alternatives "...which minimize any significant economic impact of the proposed rule on small entities."

The first panel convened by OSHA on its proposal to reduce employee exposure to tuberculosis infections. The panel submitted its report on November 12, 1996, and we are awaiting publication of its proposal in the *Federal Register* for public comment. EPA convened its first panel yesterday on a draft proposed rule to reduce air pollution from nonroad diesel engines.

This process is new, and agencies, Advocacy and small businesses are all learning together how to facilitate effectively the input from small entities; what kind of information entities need in order to develop informed comments; how extensive the consultation should be to ensure valuable input in the earliest stages of regulatory development; how the panel should relate to and interact with the small entities, etc. What seems clear, even from this limited experience, is that consultation with small entities at the earliest possible juncture can only enhance the process. It will introduce regulators to some hands-on real life experiences, not merely through comments on paper, but through actual conversations with small business people.

OSHA has started working with the Office of Advocacy to receive early input from small entities for a draft proposed rule for safety and health programs. An official panel will be convened following regional meetings that are to be held throughout the United States to solicit comments.

EPA's NAAQS Rulemaking

The primary issue in today's hearing is whether the EPA was obliged by SBREFA to convene a Small Business Advocacy Review Panel for the proposed rules for National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter.

Let me start by saying that the Office of Advocacy is fully aware of the difficult task EPA has to implement provisions of the Clean Air Act. Searching for and culling the kind of scientific information needed to develop such standards is not an easy task. It appears that EPA has done extensive outreach and study on the issue. EPA is also under a court imposed deadline to promulgate a standard for particulate matter by July 19, 1997.

Having said that, the Office of Advocacy maintains that EPA should have convened a Small Business Advocacy Review Panel, in compliance with SBREFA for the NAAQS proposals for ozone and particulate matter. In a letter dated November 18, 1996, we formally notified the EPA of our position (letter attached). We advanced this position through staff discussions at interagency meetings held throughout the summer of 1996. Ultimately, the EPA disagreed with our position.

The EPA has maintained that SBREFA does not apply to these standards since the standards in and of themselves do not require small entities to comply. The EPA contends that because they are not regulating the small businesses directly there is no obligation to

consider the potential impacts. The direct regulatory impact of the standards, according to the EPA, only result from the actions set out in the EPA-required state implementation plans. In developing this position, the EPA relied on two court cases that interpreted regulatory agency obligations under the Regulatory Flexibility Act. Those cases held that compliance with the RFA did not require agencies to assess the *indirect* impacts of their regulations on small entities. Advocacy has contended that these cases do not apply to the EPA's situation since the agencies involved in the referenced cases had no regulatory jurisdiction over the entities that would experience *indirect* impacts, unlike EPA's standards which will have a *direct* impact on small entities.

While maintaining its position, the EPA did agree, however, voluntarily to conduct a SBREFA-like panel process. It has held two meetings with small entities, the results of which, we are advised, EPA will submit for the record. As of this date, we have not received a notice from EPA of plans to convene a panel of the three agencies, in response to our November 18, 1996, letter.

Whether or not EPA is required by SBREFA to convene a Small Business Advocacy Review Panel for this rulemaking is a question about which reasonable people can disagree. Two groups of lawyers have interpreted the court decisions differently. Resolution of the disagreement ultimately is up to the courts to decide. Advocacy has no veto power over agency decisions; we cannot compel an agency to do anything. It can only by persuasion and, yes, by *advocacy* on behalf of small business interests, urge agencies to alter their regulatory proposals and remind agencies of their obligations under the RFA. We believe that the intent of the law was clear (i.e., significant small business impacts must be considered through the panel process). SBREFA has both elevated the

importance of this task and complicated it at the same time because of difficulties in getting reliable data on the impact of regulations on small business.

Comments that Advocacy submits on regulations take on an added importance in the public record given judicial review. We take our responsibilities seriously. Advocacy comments on the EPA's obligations under SBREFA are now on the record. All we can do is await court action by small entities, if one is initiated, on the standards. If appropriate, the Office of Advocacy may use its enhanced authority to file *amicus curiae* briefs in a court appeal.

Thank you, Mr. Chairman and the committee for the opportunity to testify.

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF CHIEF COUNSEL FOR ADVOCACY

NOV 18 1996

Honorable Carol Browner
Administrator
United States Environmental Protection
Agency
401 M Street, S.W.
Washington, D.C. 20460

Subject: SBREFA and EPA Review of the National Ambient Air Quality Standards (NAAQS) for Ozone

Dear Administrator Browner:

This letter addresses a matter of great importance to small businesses: the Environmental Protection Agency's review of the National Ambient Air Quality Standard (NAAQS) for ozone. We received a copy of the draft regulation on November 8, now scheduled to be proposed late this month.[1] In the draft regulation, EPA avoids preparing a regulatory flexibility analysis by making a certification under the Regulatory Flexibility Act, 5 U.S.C. §601 et seq., that the revision of the ozone NAAQS will not have a "significant economic impact on a substantial number of small entities." Considering the large economic impacts suggested by EPA's own analysis that will unquestionably fall on tens of thousands, if not hundreds of thousands of small businesses, this would be a startling proposition to the small business community.

We urge the agency to rethink its position, and convene a small business advocacy review panel as required by the new Small Business Regulatory Enforcement Fairness Act. EPA has included some preliminary small business analysis within its draft economic analysis, but some additional work needs to be done to conform with the requirements of the initial regulatory flexibility requirements of 5 U.S.C. §604. We also suggest that the agency reconsider the stringency of the proposal.

[1] The Clean Air Act requires EPA to set air quality standards in the form of National Air Quality Ambient Standards (NAAQS). These standards serve as the baseline for measuring whether areas of the country are in attainment with the Clean Air Act's air quality goals. Nonattainment areas are subject to requirements that are designed to improve the air quality in order to permit the areas to attain compliance with the NAAQS.

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I. SBREFA Does Apply To this Rulemaking.

In the November 1 draft preamble, EPA indicated that the revision of the ozone NAAQS would not require the preparation of a regulatory flexibility analysis because the regulation does not *directly* regulate small businesses, and therefore, has no impact on small entities, as those terms are used in the Regulatory Flexibility Act. Instead, the small businesses are only regulated as a result of additional federal and state regulatory actions in order to bring the nonattainment regions into compliance with the revised, more stringent standard. EPA relies on two court cases to support its position that SBREFA does not apply to this rulemaking. While this position is arguable, we do not believe that the holding of those cases apply to this regulation.

In the Mid-Tex and United Distribution cases[2] cited by EPA, the petitioners sought to require the Federal Energy Regulatory Commission (FERC) to prepare regulatory flexibility analyses of its rules on entities that were not at all subject to regulation under FERC's organic statute. In both cases, the court decided against the petitioners, finding that "no regulatory flexibility analysis is necessary when [an agency] determines that the rule will not have a significant economic impact on a substantial number of small entities that are subject to the requirements of the rule." Mid-Tex, 773 F.2d at 342 (emphasis added); accord, United Distribution, 88 F.3d at 1170 ("FERC had no obligation to conduct small entity impact analysis of effects on entities which it does not regulate.").

In our view, EPA's proposed revision to the ozone NAAQS presents an altogether different situation than that on which the Mid-Tex and United Distribution cases turned. Specifically, the regulatory agency in these cases -- FERC -- had no jurisdiction to regulate the small entities that petitioners wanted to have evaluated in an RFA. In contrast, the regulatory agency in the ozone rulemaking -- EPA -- does have jurisdiction to impose controls on and otherwise regulate the small entities that would be the subject of the regulatory flexibility analysis that is being sought here. Moreover, as a result of the revised ambient standard, the agency acquires additional regulatory authority over small businesses.

First, EPA has the authority to demand -- and will inevitably continue to demand under any new ozone ambient standard program -- that states regulate small entities in their state ozone control plans. Next, those state plans must be sent to EPA for approval, and once EPA approves those regulatory programs, they become part of the federal law. Second, many federal clean air provisions that affect small businesses are automatically effective upon the redesignation of an area's nonattainment status under EPA rules and guidance (e.g. inspection and maintenance programs, auto fleet requirements).

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[2]Mid-Tex Electric Cooperative, Inc. v. Federal Energy Regulatory Commission (FERC), 773 F.2d 327 (D.C. Cir. 1985); United Distribution Companies v. FERC, 88 F.3d 1105 (D.C. Cir. 1996).

Therefore, in contrast to the regulatory application issues involved in Mid-Tex and United Distribution, small firms obliged to meet control requirements under federally enforceable ozone control provisions that implement the ozone NAAQS are "subject to the requirements" of the NAAQS. EPA cannot plausibly maintain that it "does not regulate" such entities under the Clean Air Act. The clear words of the RFA indicate that agencies can only avoid the requirements if there is no "significant economic impact" on "small entities [businesses]." EPA cannot make such a finding here. Thus, the regulatory flexibility analysis and the associated SBREFA advocacy panel requirements are mandated for this rulemaking.

Not only does EPA's current position -- that promulgation of an ambient standard is wholly separable from that standard's implementation -- ignore the reality that certain measures affecting small businesses flow inexorably from promulgation of a NAAQS, but also this position may not be consistent with the Agency's previous views on this issue. For instance, in 1984, when EPA proposed to retain the then-existing NAAQS for nitrogen dioxide (NO_2), the Agency observed that while a "NAAQS for NO_2 by itself has no direct impact on small entities," it does "force ... each State to design and implement control strategies for those areas not in attainment." 49 Fed. Reg. 6876 (Feb. 23, 1984) (emphasis added).[3]

In the past, one could generally not get judicial review of Agency determinations that a given regulatory action would not have a significant impact on small entities. As you know, though, the Regulatory Flexibility Act has recently been revised to change that. The Act now provides expressly for judicial review of agency certifications under §605(b).[4] It is in this context that we strongly urge EPA to reconsider its position.[5]

II. EPA Needs to Add More Small Business Economic Analysis.

In this case, we applaud EPA's partial fulfillment of the RFA analytic requirements in its draft economic analysis under Executive Order 12286. We do ask that EPA add some additional detail on the small business impacts in the analysis, including the baseline costs of the current ozone standard and the affected small business industry impacts, that address the following issues.

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[3] EPA took a similar approach when it reaffirmed the NAAQS for carbon monoxide (CO) in 1985. The Agency reiterated that although a "NAAQS for CO by itself has no direct impact on small entities," it does "require each State to design an implement control strategies for those areas not in attainment." 50 Fed. Reg. 37,499 (Sept. 13, 1985).

[4] Specifically, subtitle D of the Small Business Regulatory Enforcement Act of 1996 revises §611 of the Regulatory Flexibility Act to provide, among other things, that "[f]or any rule subject to this chapter, a small entity that is adversely affected or aggrieved by final agency action is entitled to judicial review of agency compliance with the requirements of section[] . . . 605(b)."

[5] We have not had time to review the proposed revisions to the particulates NAAQS and its relationship to SBREFA. However, we believe that these comments apply equally to EPA's failure to convene a SBREFA panel for this proposal.

Promulgation of a revised ambient standard would have a significant impact on at least tens of thousands of small businesses. EPA's own draft November 3 analysis (admittedly very approximate) reveals shockingly high impacts. For the range of alternatives addressed in the analysis, at least 27 and, as many as 78, three digit SIC code industries (establishments with 100 or less employees) would experience an annual cost in excess of 3% of sales. At least 10, and up to 54 three digit SIC code industries would face costs in excess of 10% of sales. If EPA had examined the impacts on facilities with less than fifty employees, rather than averaging these facilities with the larger small establishments, these projected cost impacts would have been dramatically more severe. Furthermore, these costs are ***in addition to the costs required by the current standards. Thus, this regulation is certainly one of the most expensive regulations, if not the most expensive regulation faced by small businesses in ten or more years.***

Implementation of this new standard means the adoption of measures that would have a dramatic impact on virtually all businesses, both large and small. For example, implementation of the revised ozone NAAQS would impose the following types of control requirements on a wide variety of sources in nonattainment areas:

- Volatile organic compounds (VOC) and nitrogen oxide (NO_X) controls for emitters of greater than 100 tons per year down to 10 tons per year for small businesses in Los Angeles and 25 tons in cities such as Houston or Chicago.
- VOC reductions -- in accordance with EPA's control technique guidelines (CTG) -- needed to meet a statutory requirement to reduce VOCs by 3% per year.
- Motor vehicle inspection and maintenance.
- Low NO_X boiler specifications for commercial and industrial facilities.
- VOC reductions on a variety of commercial and consumer products.
- Low-emission fleet vehicle requirements for employers with 10 or more vehicles.
- Autobody refinishing VOC controls in CTGs.

These controls are not optional under the Clean Air Act regulations, nor under the many guidance documents issued by EPA regarding the implementation of the current ambient standards. When states did not move promptly enough in the past to implement some of the control measures just listed, the agency issued formal findings that the states had "failed to make complete ozone nonattainment state implementation plan submittals" and threatened those states with sanctions if they did not soon adopt rules in accordance with EPA guidance. See 61 Fed. Reg. 36292 (July 10, 1996). We expect EPA to continue to follow this practice in the future.

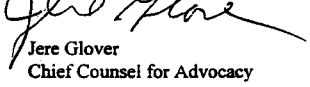
Finally, we are extremely concerned about the cost implications of this proposal. Perhaps more importantly, this concern is heightened by the large body of evidence suggesting the paucity of health benefits that would result from a revised standard. In a November 1995 letter to EPA, the Clean Air Scientific Advisory Committee (CASAC) concluded that the health benefits from the current ozone NAAQS (0.120 ppm) appears to be generally equal to the health benefits from the more stringent ozone standards then being considered by the agency (0.07 - .09 ppm). The CASAC letter states that ***none of the proposed alternative standards*** (which included the draft proposal now under consideration) ***were "significantly more protective of public health."*** Frankly, we are puzzled by this apparent difference of opinion between EPA's own group of health experts and the EPA draft preamble. We have asked EPA staff to redraft the preamble to elaborate on this apparent difference of opinion.

In addition, we are concerned with the lack of analysis of the proposed alternative using the average of the third highest 8-hour concentrations and the unknown attendant additional costs. EPA should reconsider this form of the proposal, and consider proposing the average of the fifth highest concentrations, which was analyzed by the agency.

III. Conclusion

If EPA does not choose to convene a small business advocacy review panel, it should, at a minimum, convene an informal group of small business representatives to obtain comments on the rule after the proposal is issued. In this manner, the previous lack of small business input can be remedied. We recommend that you reconsider the proposal and add additional small business detail to the Executive Order analysis. We look forward to working further with the agency regarding this and other matters. Please feel free to contact me or Kevin Bromberg of my office at 205-6964.

Sincerely yours,



Jere Glover
Chief Counsel for Advocacy

cc: Mary Nichols, EPA
Tom Kelly, EPA
Sally Katzen, OMB

Mr. MCINTOSH. Mr. Cannon, I understand you do not have prepared remarks, but would you like to make a comment at this point?

STATEMENT OF JOHN CANNON, GENERAL COUNSEL, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. CANNON. Mr. Chairman, I don't have prepared remarks; and I am prepared to answer questions on the legal issues that have been raised today. I am sure it will be the subject of further discussion.

Mr. MCINTOSH. Thank you. Thank you for sticking around.

Let me now turn over the Chair to my vice chairman, Mr. Sununu, who will proceed with questions. If I could ask you to reserve my 5 minutes for an appropriate period, I will be back shortly.

Mr. SUNUNU [presiding]. So noted.

At this time, the Chair would recognize Mr. Snowbarger for 5 minutes for questions.

Mr. SNOWBARGER. Thank you, Mr. Chairman.

Excuse me while I flip to the testimony, because I want to make sure I get this quoted right.

I know the chairman has a line of questions that he wants to pursue with you, Ms. Katzen; but I just can't pass this one up. Thus, given these factors, OMB's position on EPA's compliance with the Regulatory Flexibility Act in these rulemakings is as stated by EPA and SBA. OMB has no separate opinion on this issue.

The way I have used these kinds of statements in the past is, when somebody talks to me about a particular issue, I say, well, I have some of my friends that feel this way about it, and I have some of my friends that feel that way about it, and I agree with my friends.

Where do you stand? SBA and EPA are taking a different stance on this issue, and you have agreed with both of them—or you are not agreeing with either one of them. I don't understand.

Ms. KATZEN. Thank you. I don't have an opinion on this.

It is an interpretation of the Reg-Flex Act; and, as the chairman knows, there are a huge number of responsibilities that are put in the Office of Information and Regulatory Affairs for implementation and guidance and analysis of a variety of different statutes. Reg-Flex is not one of them. It is one that we have supported. It is one that we worked with within the administration to have the President support judicial review of Reg-Flex, which was a very important piece of SBREFA.

And I work closely with SBA. We had a memorandum of understanding that Mr. Glover and I entered into 3 or 4 years ago in which I would refer to his office regulations that come to our office for review where there are issues that we think may be of interest to him under the Regulatory Flexibility Act, and we refer those to him.

So I think I agree with my friends, mostly because I haven't done the kind of analysis that I would do if I were asked to, which I have not been in this case—to take a position.

Mr. SNOWBARGER. Again, I think when the chairman returns, he has some followup questions to that. I will let it go at this point.

Mr. Glover, I would like to focus on—it didn't come from your testimony but came from the letter that I believe you sent to EPA back last fall concerning your—well, about your concerns about compliance with SBREFA. It is my understanding that EPA has relied on two particular cases to say that these requirements don't apply to them in this particular rulemaking setting—the Mid-Tex case and United Distribution case.

It was my understanding you disagree with that legal interpretation. Could you explain for the committee a little more detail why?

Mr. GLOVER. Yes, I can. I think the issue that this rule will not have a significant impact on a substantial number of small businesses, what we are seeing is several things.

One, we are seeing that those cases were fairly narrow; and they were involving a situation where the businesses involved were unregulated. There was no regulation at all on those industries, on those businesses. The small businesses were outside of the scope of the agency's abilities to regulate them. I think they were fairly narrowly drawn.

I think those cases were also in the context of there was no judicial review of the Regulatory Flexibility Act at all until SBREFA was passed. I think that distinction is there.

I think there are also some other regulations that are automatically triggered, so there will be an automatic trigger that goes into place. We talked about that in my letter at some place. I did include a copy of that letter attached to my testimony rather than simply reiterate what we had said there.

I think we also have some precedent where we had seen some previous actions of EPA where they had gone ahead and done Reg-Flex analysis in similar situations. So we felt the Regulatory Flexibility Act—the first impression is this regulation will have a significant impact on a substantial number of small businesses. It is just going to happen, folks. Let's not kid ourselves. It is going to happen.

Now, is it a direct impact or is there somebody else involved? We can argue about that. But to say it won't have any impact I think is simply—it will have an impact. It may be that someone else—there is a third party that intervenes, that forces that to happen, but it is going to have an impact.

So those were the arguments we laid out. Our position hasn't changed since we wrote that letter back in November.

Mr. SNOWBARGER. Understanding that the whole purpose behind the Reg-Flex Act and SBREFA specifically was to allow small businesses to have a greater impact on the decisionmaking process sooner and understanding that the White House, through its small business conferences and things of that nature, has also expressed some concern about this, how do we now find that in a sort of a battle of interpretations between two agencies we are not protecting the small business?

Mr. Glover or Ms. Katzen, either one?

Mr. GLOVER. I don't have veto power over agency action; and, quite frankly, I don't seek that. If you offered to me, I would run away from it.

But I do think that we will have our voices heard. I think there will be a challenge in this matter; and I think, ultimately, we will have clear law in a year or two as to exactly what is meant here.

Mr. SNOWBARGER. It seems pretty disappointing that you have to have your say by going to court, I guess.

Mr. GLOVER. Thank you for the opportunity to also have our say here today.

Ms. KATZEN. Part of my answer to that would be to step back from the legal requirements——

Mr. SNOWBARGER. By the way, we have had an awful lot of stepping back today.

Ms. KATZEN. OK, let me step forward to the policy implications of this. This is why I think in this particular instance I see merit in SBA's argument; and I also see merit in EPA's analysis of this, to the extent we are talking about a health-based standard.

We are asking the question of not whether the period of time for compliance should be extended, whether a separate requirement should be imposed, whether reporting requirements can be tailored. We are talking about what the science tell us about the health base that you need to satisfy the statute? And, on that basis, given the intent of the statute, is there something that the small business community—as a small business community—can contribute in a meaningful way?

I raise that as a question without a predetermined outcome.

On the other hand, when it comes to the implementation, I believe the Regulatory Flexibility Act is absolutely clear; and EPA has brought small business in to consult on a variety of ways. The first OSHA panel was the tuberculosis panel, and that was very salutary in tailoring the rule.

Mr. SNOWBARGER. I understand that. The question we have been trying to raise today is that there are some of us that feel that there has been a wrong decision made in terms of the procedure, that there were some hoops that were supposed to be jumped through—and Mr. Glover agrees with those hoops. They weren't jumped through.

And now, all of a sudden, the action of the Agency and its procedure has created a cause of action in court, a reason to go to court, that goes beyond the health standard. It foes to the process of determining what that health standard should be. That is what concerns me.

Mr. SUNUNU. The gentleman's time has expired.

I would like to recognize Mr. Kucinich for 5 minutes. We can pick up that line of questioning if we have time reserved at the end.

Mr. KUCINICH. Thank you very much, Mr. Chairman, and to Mr. Glover.

I am looking here at the conclusion of your letter of November 18, 1996, wherein you recommend that the EPA convene an informal group of small business representatives to obtain comments on the rule.

I am also looking at your testimony prepared today on page 8, April 23rd. It says the EPA did agree, however, voluntarily, to conduct a SBREFA-like panel process. It held two meetings with small entities, the results of which we are advised EPA will submit for the record.

Is EPA trying to involve small business or are they not?

Mr. GLOVER. I think they clearly are, and of the various offices of EPA the Air Office has always been a little bit better than some of the other parts in doing that. We have had discussions early with them. They made changes we suggested.

Now, on the big issues, we have not come to any meeting of the minds with that. They have been responsive in having panels, but we did recommend people for those panels. They brought small business in. They convened them. So, yes, they are being responsive to small business in a general way.

The question is, legally, technically, are they complying with SBREFA? To that, my answer is no. But, otherwise, are they going out and doing what they said they would do and what we asked them to do? They certainly are.

Mr. KUCINICH. So they are technically not complying, but they are meeting with business entities?

Mr. GLOVER. That is correct.

The problem that we have with the small business is the earlier small businesses, the agencies, start considering small business, the more likelihood they are going to fashion a reasonable recommendation, a reasonable regulation, that is going to be fair to small businesses. The whole idea behind the panel process is to get us involved in that process very early on. We have certainly had EPA agree to do something like this, and they brought small business in.

What the ultimate outcome will be after the regulation was proposed, what happens in the final regulation, this will be a factor they will consider; and I appreciate very much EPA being willing to have these panels and bring small businesses in; and I appreciate their willingness to listen to what they are saying.

Mr. KUCINICH. Your job, in effect, if I may, is to make sure small business gets a hearing, is that correct?

Mr. GLOVER. That is part of my job. Other parts of my job is to report to Congress on the Regulatory Flexibility Act and the Agency's compliance with the act. There are a variety of other things we do—outreach to small businesses. We do a variety of different things.

Mr. KUCINICH. If small business is not getting a hearing, it is your responsibility to see they do get one. You are saying in your testimony here that you are trying to discharge your responsibility, and what you are saying is they have had some meetings already. Are you responsible for that?

Mr. GLOVER. Yes, sir.

Mr. KUCINICH. Thank you.

I also want to ask a question of Ms. Katzen. On page 2 of your testimony, you speak of the Executive order which requires agencies to prepare economic analyses for proposed and final rules and then submit them. The information that you have been presented by the EPA, are you satisfied that it fulfills that requirement?

Ms. KATZEN. We received with the proposals draft regulatory impact analyses, which contained extensive cost-benefit analyses. As I have indicated in my response to the chairman, we have had a lot of discussions with EPA as to whether additional work would

be productive; and they have agreed to do additional work at the final rule stage.

Mr. KUCINICH. Fine. And could I ask you then, when you are speaking of cost-benefit analysis, the documents that you have been presented with, do they speak of the benefits of public health, for example, the benefits that people may have from not having a pulmonary problem exacerbated by air pollution, the benefits asthmatics may have from not having a climate that is rife with air pollution? Are those health benefits quantified?

Ms. KATZEN. Yes, some of the health benefits can be quantified and indeed are monetized. Some are not monetized but are quantified. Some are discussed in qualitative terms as well. Our Executive order provides that an agency should quantify to the extent possible and otherwise provide a qualitative description, and that it all be included in the analysis.

Mr. KUCINICH. Are you familiar with the results when the monetized benefits—I will be concluding here. When the monetized benefits are compared to the costs, are the benefits based on the information that you have received? Is it more beneficial in terms of money to the public or is it more costly?

Ms. KATZEN. The combined particulate matter-ozone standards, taken together, show benefits that justify the costs. On a disaggregated basis, the benefits are appreciably greater for the particulate matter—the fine particle—standards, than they are for the ozone standard, where the benefits and costs are each estimated in a range and they do overlap.

Mr. KUCINICH. I think it would be interesting, Mr. Chairman, to have that kind of information presented for our record. That is one of the reasons I am sitting here, is to try to find out what the cost benefits are, if, in fact—and I think there should be some economic analysis that attends to the health benefits.

Thank you.

Mr. SUNUNU. Thank you, Mr. Kucinich.

Mr. McIntosh, you are recognized for 5 minutes.

Mr. MCINTOSH. Thank you, Mr. Chairman. It feels good, doesn't it, John?

Let me ask a question of Mr. Cannon, and that is a question I addressed earlier to the Administrator but didn't get a very good answer.

How can you reconcile the two statements—the certification that there are no significant impacts, only small entities, and then the regulatory impact analysis statement on page E–12 that says there are significant impacts on small businesses of the preferred option that EPA is proposing?

Mr. CANNON. I think those statements are reconcilable in light of the different purposes of those two documents.

Regulatory impact analysis is designed to, and in fact does, engage in a hypothetical review of what overall costs and benefits resulting from a particular action like the NAAQS might be. It makes certain assumptions about implementation efforts by the States under the Clean Air Act, and our understanding is that that is what the Executive order requires of us and expects of us.

On the other hand, the Regulatory Flexibility Act, and particularly the regulatory flexibility analysis provisions, are focused on requirements applicable to small entities.

The purpose of the regulatory flexibility requirement——

Mr. MCINTOSH. Isn't there a superseding requirement that both statements be truthful?

Mr. CANNON. I think both statements are truthful, Mr. Chairman.

Mr. MCINTOSH. Even though they contradict each other?

Mr. CANNON. They are addressing different points under different authorities. But I think those two different authorities——

Mr. MCINTOSH. This reminds me of a statement that Richard Nixon once made when I was a little kid, and I was horrified by it, but it was something along the lines: You may think you know what I said when you heard me say something, but I am not sure you understand what I said is not actually what I meant. It is a bizarre contortion to say that two things that are opposite conclusions are both true.

Mr. CANNON. I don't think that is bizarre at all. It happens in the law all the time, as you know.

Mr. MCINTOSH. I don't buy into that.

Mr. CANNON. Under the Regulatory Flexibility Act, as the courts have made clear in the Mid-Tex and in the United Distribution Co.s decisions, the certification of no significant impact on a substantial number of small entities is a certification that goes to impacts on small entities subject to the requirements of the rule.

That is perfectly consistent with the purpose of the regulatory flexibility analysis, which is to look at those requirements, to identify them, things like recordkeeping, compliance obligations, and so forth, and to tailor them to meet the particular needs and requirements of small businesses, so that disproportionate impacts from those requirements on small businesses can be avoided.

Mr. MCINTOSH. Mr. Glover, do you agree that has been sufficiently reconciled?

Mr. GLOVER. No, sir.

Mr. MCINTOSH. I don't either.

The question I have now, actually for you, Sally: We talked about the role of OIRA a lot in the last Congress, and I sponsored a bill that would have given that Agency a lot greater powers under statutory terms to coordinate the review of regulations.

One of the things you said at that point was, you are justifiably proud of the open rulemaking process and the increased accessibility for the public, increased cooperation and coordination among the Federal agencies, between Congress and the executive branch and the Federal Government, State, local and tribal governments, businesses and individuals, and good processes produce good decisions.

I am deeply troubled by this particular process where EPA, the agency issuing the regulation, and the SBA, the agency that has authority to interpret SBREFA, have diametrically opposing conclusions about whether the Agency has followed the law in this area.

You tell me OIRA takes no position on that. You don't have any preference at all between those two legal authorities. Do you dis-

agree with my statement that the fact that that is not resolved increases the chance of litigation after the fact and once the rule is promulgated?

Ms. KATZEN. Starting at the end of the question, it will probably be another allegation in the complaint of one of the petitions for review of the resulting rule and thus be part of the litigation which will inevitably occur no matter what is decided and no matter what processes are followed.

Mr. MCINTOSH. But as a lawyer, would you advise your client, hypothetical client, if you could remove complaints, items in a complaint, to do so?

Ms. KATZEN. That is generally sound advice that I would give. One of the roles that I perform, however, is not to be a legal advisor. I heard earlier some reference to who should resolve this issue, and I say strongly, it is not me.

There is within the Justice Department, the Office of Legal Counsel, to whom questions of interpretation of law are uniformly forwarded when there is a conflict within the administration.

Talking about regulatory policy, attempted——

Mr. MCINTOSH. Did you all seek an interpretation on this question?

Ms. KATZEN. No.

Mr. MCINTOSH. Was there any discussion of that option?

Ms. KATZEN. No.

Mr. MCINTOSH. Has OIRA ever returned a regulatory proposal or any of the items that it reviews because, in their opinion, the Agency had failed to meet the legal standards required in proposing the rule?

Ms. KATZEN. The issue of whether we have returned a regulation under Executive Order 12866—and I think there have been maybe six or seven instances in our tenure—we view as the sign of a failure, the sign of an impasse, where we cannot have the Agency accommodate, be persuaded by, the suggestions that have been made that would improve or enhance the regulatory process.

As I quickly here review in my mind what I remember to be the specific instances for those returns, those were on policy grounds rather than legal grounds, although the legal grounds may well have been a factor.

With respect to Regulatory Flexibility Act itself, our function is to review a proposed rule to see if there is, for example, a certification which was present here. The question of whether that certification was appropriate is something that I would have referred to Jere Glover as consistent with our memorandum of understanding of referrals of such matters.

Mr. MCINTOSH. So my concern is, when Jere Glover reports back to you no, it is not correct in this situation, why did you clear the rule?

Ms. KATZEN. Actually, there has been a lot of reference to his letter of November 18th. There is also a letter of November 27, and the record would be more complete by adding this letter to the record as well. It is a letter to Senator Bond, signed by Jere Glover and Mary Nichols jointly, which says that without having to resolve the legal question, there is a process in place for getting the necessary input, the appropriate input, from small businesses. On

that basis, both of these agencies were prepared to go ahead, and therefore there was no reason for me to have to resolve the dispute.

In addition, there was at that point a court-ordered deadline of November 29th that had to be met for the issuance of the rule. With this additional information from Mary Nichols and Jere Glover, I felt that the issue had been sufficiently handled for purposes of our concluding review in the face of a court-ordered deadline.

Mr. MCINTOSH. My time has expired. Let me just express disappointment that OIRA doesn't independently make those conclusions, and, furthermore, when they have a signal from the controlling legal authority, as the vice-president coined that phrase, that there is a problem, then I think you need to undertake an independent assessment about the impact of that legal dispute on the ultimate viability of the regulation.

Mr. SUNUNU. Why don't I turn the Chair back over to Mr. McIntosh at this time.

Mr. MCINTOSH [presiding]. Fine. Thank you, Mr. Sununu, for serving very well as chairman. It is a pleasure having you as my vice chairman.

Let me turn now to Mr. Sanders.

Mr. SANDERS. Mr. Kucinich, do you want to go?

Mr. KUCINICH. If I may. Thank you, Mr. Sanders. Thank you, Mr. Chairman. I want to ask Ms. Katzen a question here, and I want to make sure I understand this.

If you have a disagreement within the administration, you go to Judiciary; right?

Ms. KATZEN. If there is a disagreement about an interpretation of law, the ultimate arbiter of legal interpretations would be the Office of Legal Counsel at the Department of Justice.

Mr. KUCINICH. If there is a disagreement within the administration, that is who you go to; right?

Ms. KATZEN. Yes.

Mr. KUCINICH. Mr. Glover, if there is a disagreement within the administration, who do you go to?

Mr. GLOVER. That certainly is an option, to go to the Office of Legal Counsel. We did not choose to do so in this case. We do not have to do so.

Mr. KUCINICH. Now, I want to understand your status here, because I am new to Congress and you can help me in getting a definition here.

Are you part of the administration itself? Are you a member of the administration in the same way Ms. Browner is?

Mr. GLOVER. Yes, I am.

Mr. KUCINICH. What is your status in the administration?

Mr. GLOVER. The Office of Advocacy was created 20 years ago to be an independent voice for small business within the administration. We work with the Federal agencies, we work with the White House, to help make sure that small business's views are being considered.

Mr. KUCINICH. Do you report to the Administrator of Small Business?

Mr. GLOVER. I do not.

Mr. KUCINICH. So you are independent?

Mr. GLOVER. Yes, sir.

Mr. KUCINICH. Your independent status and the status as a member of the administration at the same time, does that put you in any kind of a conflict with serving the administration?

Mr. GLOVER. It does from time to time, yes, sir.

Mr. KUCINICH. And what about your—do you find yourself ever in conflict with a group like the National Federation of Independent Business?

Mr. GLOVER. Yes, sir, on several occasions.

Mr. KUCINICH. Do you have any disagreements with them on the Clean Air Act right now?

Mr. GLOVER. I am not sure. The proposals, amendments to the Clean Air Act?

Mr. KUCINICH. The clean air proposals that we have right now. Do you find yourself in agreement with the National Federation of Independent Business, or do you tend to agree with Ms. Browner?

Mr. GLOVER. I don't have a position on the Clean Air Act amendments that are currently pending.

Mr. KUCINICH. But you do talk to small business since you are their advocate. What I was interested in, since you are the advocate for small business, can you say that the position of the National Federation of Independent Business, which is the principal spokesperson group for small business in this country, that that is the position that you are here to advocate as the advocate of small business?

Mr. GLOVER. No, sir. No organization sets policy for the Office of Advocacy. I set that alone, and I will not follow—just because one organization thinks that is what is right for small business, that is not controlling over what I do. I do that based on my own independent analysis and my staff's analysis.

Mr. KUCINICH. You are saying you are really not here as a voice of business or a voice of the administration?

Mr. GLOVER. That is correct.

Mr. KUCINICH. So then who are you a voice of?

Mr. GLOVER. I am a voice of the Chief Office of Advocacy at the Small Business Administration.

Mr. KUCINICH. Thank you.

Mr. MCINTOSH. Let me turn to Mr. Sununu for questions.

Mr. SUNUNU. Mr. Cannon, earlier this morning Mr. Kucinich talked about the importance of disclosure, public disclosure, for families who are going to be affected potentially by these regulations, businesses, obviously our role in the Congress, the importance of disclosure of the underlying data and the science, that rulemaking is based on.

Could you provide a description of what the position of the EPA is on your legal right to the underlying data that was put together and created under programs that have received public assistance?

Mr. CANNON. We have rights regarding for data which our assistance moneys are used to produce. As the Administrator testified this morning, none of the assistance agreements that we had relating to these studies involved the production or generation of data.

Mr. SUNUNU. You don't think any of the funding that you provided related to any of the studies that have been cited give you legal right to any of the underlying data?

Mr. CANNON. We do not have a legal right in the form of a possessory right to any of the underlying data. Now, there are additional provisions of our assistance regulations that provide access by EPA to—I don't know why that light went on.

Mr. SUNUNU. That was no 5 minutes. That wasn't 5 minutes. I think there is a little problem with the timer. Please continue.

Mr. CANNON. There are additional provisions which provide access by EPA to records pertinent to assistance agreements that we enter into.

Mr. SUNUNU. The studies that have been cited were provided for under contract with the EPA. There was funding. Most, if not all, of the funding for the studies came from the EPA. But you don't feel that you, the Congress, or the public for that matter, has a right to fair and open review and evaluation of that underlying data?

Mr. CANNON. We don't have a right to that data because we didn't fund the collection of that data.

If you will let me complete my statement, there is another provision that arguably allows access to data if it is manipulated in studies that we fund, if that data constitutes a record pertinent to the award and the Agency decides access to that data necessary.

Mr. SUNUNU. For the record, I would emphasize that the Code of Federal Regulations states the Federal Government has an unrestricted right to use any data or information generated using assistance funds. I think there are many, amongst the public, in Government, and certainly here in Congress, that feel that it is not just a right for exposure and re-evaluation of continued analysis, but it is also part of the scientific process.

I yield the balance of my questioning time to the chairman.

Mr. MCINTOSH. Cindi, how much time is left?

The CLERK. One minute.

Mr. MCINTOSH. I have two lines of questions. Let me try to get one of them in, and then I will recognize Bernie.

Mr. Glover, is it possible for EPA to correct the legal defects in the rulemaking process so that they will have met the requirements of SBREFA?

Mr. GLOVER. I suspect it is. We are at the beginning phase of the implementation of SBREFA, and I think that if they were to withdraw their certification and do a final regulatory analysis, the court would look at that as perhaps good faith attempts to comply with the law. I think there might well be something there. But I don't have a formal legal opinion on that. We have not looked at it in depth.

Mr. MCINTOSH. If I understand, you want to give some thought to that question, because it could have significant repercussions, and perhaps in a reasonable period of time, could you give us your answer on whether they need to repropose in order to do that or not?

Similarly, Sally, and if I may ask you to join with me in making an assumption that you may not agree with, although maybe you do, but if there is a flaw under the Unfunded Mandates Act and the Agency's interpretation that that law does not conclude is incorrect, which I agree, the Agency should narrowly construe that conference report comment to have explicit statutory requirement

not to perform cost-benefit analysis rather than a matter of interpretation. But I understand there is a difference of opinion there on that law.

But assuming that my interpretation is correct, is there a way that the Agency can correct the record on the two rulemakings in order to avoid a legal challenge? I don't want to preclude you from commenting on the legal conclusion either.

Ms. KATZEN. The conference report says unless otherwise prohibited by law, and the law in this area is really quite clear, it was originally EPA's interpretation to which deference is owed under Chevron that costs may not be considered.

That has been affirmed by the original court and has come up in a number of other cases, all of which have now made the law quite clear that a cost may not be considered. I read that to be unless otherwise prohibited, because they may not consider costs.

So I cannot join you in your assumption that they have incorrectly construed the unfunded mandates law in this respect, and I actually included that statement in our second year report. We file an annual report with the Congress on Agency compliance with the Unfunded Mandates Act, and I cited their statements with approval in our annual filing.

Having said that, there are various provisions of the unfunded mandates report. One of them is to certify that you have taken the least burdensome, least cost—or most cost-effective approach to the regulatory objective.

I am not sure, given that the law does not permit her to make a finding considering costs, how she would be able to make such a certification, other than as a—by the way, OIRA, our economic analysis, has established to my satisfaction that I satisfy the standards. So it really is a conundrum here that cannot be easily parsed.

Mr. MCINTOSH. Let me say, I think that would satisfy me, if she would make that conclusion, and OIRA would be subject to part of the record to back that up. I think in the absence, we just disagree on the legal interpretation of this.

But I think in the absence of an express statement in the Unfunded Mandates Act and an express statement in the Clean Air Act, that these types of effects cannot be considered. I do think the law mandates that be done as the rule goes forward when there are multiple options being considered.

But my time has expired. I acknowledge you have expressed a different one.

Ms. KATZEN. I do.

Mr. MCINTOSH. I only have one more series of questions, and Bernie has expressed a desire to wrap things up.

Let me offer you now a chance to do that, and then I will go through my last questions.

Mr. SANDERS. I will not be very long. I just wanted to ask Mr. Cannon a few questions, if I might.

Mr. Cannon, is it your understanding that throughout history, including before the passage of SBREFA, that the EPA has held a view that clean air standards apply to States, not private industry, and therefore clean air standards do not substantially impact a significant number of small businesses? Is that correct?

Mr. CANNON. We have always held the view, because the courts have directed us to hold the view, that the terms by which a State complies or comes into compliance with the ambient air quality standards are to be set by the State, not by EPA, and that actually was recently dramatized to us in a case that we unfortunately lost in the DC circuit, where the court again cited to prior authority, saying that under the Clean Air Act, and particularly under section 110 which provides for the State implementation plans, the States are to determine their requirements and control measures that are applicable rather than EPA.

Mr. SANDERS. OK. And there has been a lot of discussion today about small business and the impact of these regulations on small business. My question is, do you feel that small business concerns have been disregarded, as some have suggested, during the development of these proposed standards?

Mr. CANNON. No, I don't believe so.

Mr. SANDERS. Why?

Mr. CANNON. As Mr. Glover has outlined, we have undertaken a process to reach out to small businesses, to hear their concerns, and we have done a regulatory impact analysis, as has been pointed out, that has included some hypothetical analyses of potential costs to small businesses among others that might flow ultimately from the implementation of the ambient air quality standards that have been proposed, assuming we go forward with those.

What we haven't done is the regulatory flexibility analysis, which in our view relates to the tailoring of requirements that would be specifically applicable to small entities. Since there are no such requirements implicated in the ambient air quality standards, our view is that we don't have the ability to fulfill the purpose or requirements of the regulatory flexibility analysis in this case and therefore have chosen not to carry it out.

Mr. SANDERS. Let me ask a similar question with regard to State and local governments. Some have suggested they have not had the opportunity to give input and express their concerns. Would you comment on that?

Mr. CANNON. I think we have made efforts to reach out to State governments, certainly in this rulemaking and also to representatives of local governments as well, the National Association of Counties and others.

Ms. KATZEN. If I may comment on that for one moment, please?

Mr. SANDERS. Yes.

Ms. KATZEN. One of the questions that had been raised when the proposals were promulgated was the extent to which we would be able to afford people an opportunity to be heard during the public comment period. At that point, the White House specifically determined to encourage a very extensive outreach effort through my office. I therefore had one meeting very early on with State and local representatives, another with members of industry, the Air Standards Quality Coalition, and another with public health and environmental groups. I promised each of them that our meeting would be the first of many meetings. I have since had at least one session with other members of industry, and I have had one this week with another group.

Mr. SANDERS. You are suggesting, in fact, the EPA has reached out and tried to involve all sections of the communities?

Ms. KATZEN. That is correct. OMB has participated in that effort as well, so that the public will have multiple forums in which to speak.

Mr. SANDERS. Let me get back to Mr. Cannon, if I might. Anybody else, feel free to jump in.

There has been some discussion earlier—Ms. Browner was here—about some suggestions that the EPA has prejudged the outcome of the final ruling, you have already made your decision. Do you want to comment on that?

Mr. CANNON. I have taken a look at the Washington Legal Foundation's petition in light of what I understand the legal standards to be, and I will tell you that it is my own view that, properly understood and taken in context, the comments that are attributed to her there do not come close to the line requiring her to be disqualified.

Mr. SANDERS. OK. Again, one of the issues that has been maybe not fully understood or disagreed upon by the Members up here is what the law is about. Will you—will the EPA consider anything other than public health considerations in making your final decision on the proposal, and is that approach consistent with what the law states?

Mr. CANNON. Our understanding is, we are confined to public health considerations in making a decision on these standards.

Mr. SANDERS. So in terms of this part of the process, to do otherwise would be, in fact, in violation of the law; is that correct?

Mr. CANNON. That is our understanding of the law.

Mr. SANDERS. Thank you.

Mr. Chairman, that is the extent of my questions. Thank you.

Mr. MCINTOSH. Thank you, Mr. Sanders.

For my final set of questions, I want to switch subjects slightly here and address a topic with Ms. Katzen that is of great concern to me, and that is whether OIRA participated in an effort encouraged by EPA or others to stifle other agencies' comments in the official rulemaking record.

I wanted to submit for the record, my and my colleagues, a copy of the Senate Congressional Record dated March 20, 1997, where Senator Byrd says he understands that some Federal agencies had also planned on submitting comments to EPA as part of the public comment period. However, the Oil Daily, a trade publication, reported these agencies were prevented from doing so. They reported that, "According to a leaked memo, the agencies were muzzled by OMB."

The article further quotes from the memo as instructing agencies that, "Based upon reports from a meeting this morning, Federal agencies will not, I repeat, will not be transmitting comments on the EPA proposals."

[The information referred to follows:]

on appropriate ethnic terminology. You can also view the grainy Newsweek cover featuring Asian-American James Riady—the Oct. 28 issue, which is headlined "Candidates for Sale: Clinton's Asia Connection." From Slate's "The Compost," read Jacob Weisberg's column about the history of fund-raising fraud in the United States and Eric Liu's piece damning the press for painting Asian-Americans a having dual loyalties. PoliticsNow begins the new year with a feature, titled "1996 Yearbook: Scandals," that covers the fund-raising issue. Visit the DNC Web site for a more positive portrayal of the embattled organizations.

EPA'S COSTLY REGULATIONS

Mr. BYRD. Mr. President, the Environmental Protection Agency has proposed new rules to modify the ambient air standards for ozone and particulate matter. I recently wrote to the EPA and urged the agency to reaffirm the current standards, conduct additional monitoring of particulate matter and related air quality issues, and allow our States to complete action on the ambitious clean air standards that are already in place before implementing additional regulations. I was joined in this letter by Senators ROCKEFELLER, FORD, GLENN, and ROBB.

These proposed rules have been extremely controversial, and have been sharply criticized by State Governors, municipal leaders, and business organizations. I have recently been made aware that these rules have also been criticized by other Federal agencies.

During the interagency review of these rules overseen by the Office of Management and Budget, several Federal agencies submitted comments which questioned many aspects of the proposed rules, including their scientific basis and cost effectiveness. These comments are part of the public record. Judging by the tone of the comments from the interagency review process, it appears that many Federal agencies are concerned about these proposed rules.

In but one example, the EPA has stated that the total national cost of implementing the ozone rule would be $2.5 billion. However, the Council of Economic Advisers has stated that the cost of full attainment of just the ozone rule could be $60 billion, or $57.5 billion more than estimated by the EPA. This is a substantial discrepancy. The Department of Transportation, in its initial interagency review submission, concluded that "it is incomprehensible that the administration would commit to a new set of standards and new efforts to meet such standards without much greater understanding of the problem and its solutions." The U.S. Small Business Administration stated that EPA's proposed regulation "is certainly one of the most expensive regulations, if not the most expensive regulation faced by small businesses in 10 or more years." The SBA said that "considering the large economic impacts suggested by EPA's own analysis that will unquestionably fall on tens of thousands, if not hundreds of thousands of small businesses, this (proposal) would be a startling proposition to the small business community."

I understand that some of these Federal agencies had also planned on submitting comments to the EPA as part of the public comment period. However, the Oil Daily, a trade publication, has reported that these agencies were prevented from doing so. The Oil Daily reported that "according to a leaked memo, the agencies were muzzled [by OMB] * * *" The article further quotes the memo as instructing agencies that "based upon reports from a meeting this morning * * * Federal agencies will not [I repeat not] be transmitting comments on the EPA proposals."

Although the agencies provided critical comments during the interagency review process, there is no evidence that the proposed rules were significantly modified to reflect their concerns. OMB cannot, therefore, defend its "muzzling" of Federal agencies—as characterized by the Oil Daily—by arguing that the proposed rules reflect the collective wisdom and judgment of Federal agencies, when the exact opposite is the case. I would also note that the interagency review comments from last fall are part of the public record, and so there is no reason why the agencies could not also submit comments during the public comment period. EPA and OMB are apparently holding conversations with some of the Federal agencies, but the critical comments of other agencies will not be shared with Congress and other interested parties. On its face, this becomes a private comment period, rather than a public comment period.

I am disturbed by this apparent lack of candor and public accountability on the part of the administration in discussing these rules. These proposed rules will impose significant costs, not only on our Nation, but also on Federal agencies themselves. Many agencies and departments operate facilities that will be directly affected by these rules. As the ranking member of the Senate Appropriations Committee, I believe that these impacts and costs must be considered and reviewed as part of the appropriations process.

I am, therefore, today writing to various Federal agencies requesting that these agencies individually comment on the cost of the proposed EPA rules, both with regard to the operations of the individual departments, and upon that aspect of the Nation's infrastructure that is regulated by the departments in question. I am also writing to the Director of the Office of Management and Budget, requesting his comments on the cost of these proposed rules to the Federal Government in its entirety.

As our Nation strives to balance the budget, while at the same time providing Federal programs and services desired by the public, it is important that the significant costs of new regulations, such as these, be made available and taken into account as part of the budget process.

Mr. President, I yield the floor.

Mr. DOMENICI. Mr. President, I do not want to take much time. Am I correct in assuming that the Senate is ready to recess shortly?

The PRESIDING OFFICER (Mr. ABRAHAM). The Senate is still waiting for the House with respect to the adjournment resolution.

(The remarks of Mr. DOMENICI and Mr. GORTON pertaining to the submission of S. Con. Res. 16 and S. Con. Res. 17 are located in today's RECORD under "Submission of Concurrent and Senate Resolutions.")

Mr. LEAHY addressed the Chair.

The PRESIDING OFFICER. The Senator from Vermont.

Mr. LEAHY. Mr. President, with the concurrence of my good friend from North Dakota, I will just proceed for a moment.

HAPPY BIRTHDAY TO SENATOR DANIEL PATRICK MOYNIHAN

Mr. LEAHY. Mr. President, on March 16, Daniel Patrick MOYNIHAN, the senior Senator from New York State, turned 70. Senator MOYNIHAN has been referred to, quite properly, as the intellectual of the Senate and called by many, a renaissance man. I mean no disrespect when I say that during a couple of the gatherings of the Irish on March 17, he was also referred to as the "World's Largest Leprechaun."

To me, Senator MOYNIHAN is a good friend and a mentor, a wise voice that I heard before I was in the Senate, and since. He is a man who has spoken with great prescience on issues involving families and the economy, global power and welfare reform, on so many things.

Senator MOYNIHAN has served in administrations of both Democrat and Republican Presidents. He has always been ahead of his time, sometimes with a controversial voice that then turns out to be the only accurate voice.

Like all other Senators, I wish him very well as he heads into the latest decade of his life.

Mr. President, I ask unanimous consent that a column by David Broder entitled "The Moynihan Imprint" be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Washington Post, Mar. 16, 1997]

THE MOYNIHAN IMPRINT

(By David S. Broder)

Today is the 70th birthday of a unique figure in the public life of this nation for the past four decades, the senior senator from New York, Daniel Patrick Moynihan. Tomorrow, a day-long symposium and a celebratory dinner at the Woodrow Wilson Center will make it clear just how large Moynihan's legacy is.

Previewing the papers to be delivered, as Georgetown professor Robert A. Katzmann, a onetime student of Moynihan's and organizer of the tribute, allowed me to do, was a reminder of just how rich and varied the New York Democrat's contributions have been.

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OMB chief squelched opposing views on tougher air standards, memo says.(Office of Management and Budget Director Sally Katzen suppressed dissent over Environmental Protection Agency's ozone and particulate matter standards)

Kimberley Music

WASHINGTON -- As refiners gather in San Antonio for their annual meeting, one thing is high on the agenda -- the financially punishing effect of proposed tougher air rules and the dubious science on which the proposals allegedly are based.

And now, it seems, many federal agencies also have their doubts, but apparently have been prevented from airing them in public.

Concerns about the Environmental Protection Agency's (EPA) proposed standards for smog and soot were expressed during an interagency review, but were ignored and subsequently barred from the public comment process, documents from various agencies show.

According to a leaked memo, the agencies were muzzled by Sally Katzen, direc- tor of the Office of Management and Budget (OMB). "Based on reports from a meeting this morning with Sally Katzen, ... federal agencies will not (repeat NOT) be transmitting comments on the EPA [ozone and particulate matter] proposals," the memo said.

The rules, issued Nov. 29, would tighten standards for ozone and particulate matter (PM), otherwise known as smog and soot; and could require expanded use of reformulated gasoline.

Opponents claim they would be costly, would put hundreds more areas in non- compliance with clean air laws, and may not have been based on sound science.

These same claims -- before OMB's censorship -- were made by administration officials in an interagency review.

The camel's nose under EPA's tent came when Commerce Committee Chairman Tom Bliley (R-Va.) revealed documents showing that EPA had suppressed OMB's nega- tive comments to him about the rule. But now EPA

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has the whole camel in its tent.

According to memos and letters to OMB, several administration officials wrote to express their concern, many before the rules were issued.

"It is incomprehensible that the administration would commit to a new set of standards and new efforts to meet such standards without much greater understanding of the problem and its solutions," wrote Frank E. Kruesi, assistant secretary of transportation, in a Nov. 20 letter to Katzen.

In a Dec. 10 letter, White House Council of Economic Advisers (CEA) member Alicia Munnell said CEA estimated the cost of full attainment at about $60 billion a year. But EPA "understates the true costs of stricter [ozone] standards by orders of magnitude," she wrote, while the impact on public health is "small."

From the environmental division of the White House Office of Science and Tech- nology Policy, Rosina Bierbaum wrote to say "there are a large number of scientific uncertainties" about PM in general, while the science on the proposed PM level "is also very poor."

Similar concerns were expressed by the departments of energy, commerce, treasury, transportation, and agriculture, and the Small Business Administra- tion.

The Air Quality Standards Coalition, which released the documents, said EPA has blatantly "ignored the strong objections of several other federal agen- cies, including President Clinton's own economic advisers."

In reply, EPA says only that major proposals like the ozone and PM rules "typically involve lively discussion among federal agencies. ... The diverse views were considered and resolved in the interagency process and the decision was made to move forward." Last week, another group filed a petition to dis- qualify EPA Administrator Carol M. Browner from the process for moving forward with no regard for public concerns.

The Washington Legal Foundation (WLF) filed a formal notice against Browner for making numerous public statements on the issue before the public comment period closed March 12 -- indicating that she had already made up her mind to adopt the standards.

---- INDEX REFERENCES ----

NAMED PERSON: SALLY KATZEN

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KEY WORDS: UNITED STATES. OFFICE OF MANAGEMENT AND BUDGET UNITED STATES. ENVIRONMENTAL PROTECTION AGENCY . PETROLEUM INDUSTRY

INDUSTRY: Oil-Integrated Majors (OIL)

SIC: 9511; 9111

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Mr. MCINTOSH. My question is, at any time—and I think this was alleged to have occurred near the end of the comment period—did you instruct representatives of various Federal agencies not to file any more written comments in the rulemaking record?

Ms. KATZEN. No, I did not. The rumors of my ability to "muzzle" the agencies are, to quote or paraphrase Mark Twain, very greatly exaggerated.

It is an interesting article in Oil Daily. I don't ordinarily subscribe to it, so I haven't read it and I can't comment on the general accuracy of its assertions. I had read——

Mr. MCINTOSH. I can give you a copy of that.

Ms. KATZEN. That is quite all right, because I had read Senator Byrd's comments on this. I think it is important to understand what it is that was decided by whom and for what reason. To do this, I would like to go back to the proposal stage when we had a 3-week review period.

While my staff worked nights and days and weekends and whatever, and EPA's staff was beyond being extended any further, a lot of the agencies who came to the table came with insufficient information and, they believed, insufficient opportunity to contribute to the process. As a result, we made a commitment the day we cleared the proposal to have an expanded, extensive interagency process for review of the final packages whenever they should arrive and that we would not wait until they arrived at OMB, but that we would start and meet early and often.

So I convened an interagency process that brought everybody who had any interest to the table. I even notified some agencies who had not heard about this, and I said: Are you sure you don't want to be there? I want everybody who has an interest or even who thinks they have an interest to come to the table.

We have a two-tier interagency process. We have a technical staff level that is meeting generally once or twice a week, and we have a policy level that meets once a week. What we have been doing is going through the data requests, the kinds of information we need, and teeing up the kinds of issues we anticipate will be in the forefront of our interagency process when the final package is delivered.

As a result this, we are getting advance briefings from EPA. Sometimes it is as simple as the docket of comments. You heard from Administrator Browner the large number of comments that had been filed. EPA has prepared and are distributing a docket to all the agencies weekly so, for example, the Department of Energy might notice a comment from the American Petroleum Institute and be interested in that; the Department of Transportation might be interested in some of their constituents' comments; the Department of Interior might be interested in some of their constituents' comments. So the agencies could select the comments they want to read, and those comments would be made available. They were also being briefed on the status of the decisionmaking process.

Mr. MCINTOSH. Those were both at the technical level and at the policy level?

Ms. KATZEN. Yes.

Mr. MCINTOSH. OK.

Ms. KATZEN. And at a meeting in early March—and the comment period was to end March 12th—a question was raised by one of the agencies, and I am paraphrasing here: Gosh, we have this extensive process in which we are going to get information, we are going to have questions, and we are going to get more information. Should we be filing formal comments?

And there was a discussion among all of the people at the table. There was no decision by fiat or edict or any other command and control decisionmaking. The agencies were basically saying that, if we are going to have our input in this process, why would we file formal comments on the record with a position if, over the next several months, we are going to learn and evaluate things and maybe change our positions? And it was decided within the group as a consensus——

Mr. MCINTOSH. Was this the policy or technical level?

Ms. KATZEN. This was the policy level. It was decided at that group that it was probably more effective, more efficient, for agencies to contribute through the interagency process than through formal proceedings on the record.

And you will recall from your tenure in the executive branch, it is unusual for lots of different agencies to file formal comments. They have their say in other ways.

In this instance, it was the consensus of those assembled, and at the end someone said: So no one is going to file? And at that point it was also clear that no one there could stop anyone else from filing if they wanted to.

So it was clarified, I thought to everyone's understanding, those who wanted to file could, those who didn't want to didn't have to.

Mr. MCINTOSH. That was the answer given to that question at the end?

Ms. KATZEN. Right.

Mr. MCINTOSH. That no one is going to file. Did somebody say, "That is right," or, "Yes, we have agreed to that"?

Ms. KATZEN. You have gone to a degree of detail of the conversation. This was a policy level meeting. There were approximately 20 people around the table. People were standing up and leaving, so I am not going to time, I am not going to file.

One of the things is interesting: I will tell you there are agencies who are supportive of EPA. There is indeed even a department that believes that EPA has not been sufficiently aggressive and should have proposed much more stringent standards. I do not know if that department has filed formal comments. That department does come to our weekly meeting.

There are other departments who are very supportive of the approach that EPA is taking. I do not know if they have filed comments. In fact, at this point I can't tell you if any Federal agency has filed comments in the public proceeding. I have never instructed an agency that it is not allowed to file in the formal public process.

Mr. MCINTOSH. Did any of the agencies participating in that particular meeting subsequently file written comments in the rulemaking record?

Ms. KATZEN. I don't know the answer to that.

Mr. MCINTOSH. Could you find that out and let us know by next week? It is not difficult to determine.

Maybe you know, Mr. Cannon.

Mr. CANNON. I don't.

Mr. MCINTOSH. Do you have a list of who attended at that meeting?

Ms. KATZEN. Apparently some did file comments. Agriculture, who was present at that meeting, and Defense——

Mr. MCINTOSH. OK.

Ms. KATZEN [continuing]. Who was present at that meeting. So that some apparently did file.

Mr. MCINTOSH. Did file. And could you provide for the committee a list of all the agencies that participated in that meeting?

Ms. KATZEN. Yes.

Mr. MCINTOSH. Do you or anybody on your staff keep notes, or is there an official transcript of those?

Ms. KATZEN. No. People do keep notes. People do take notes, whether they keep the notes or for what purpose they use the notes. But as you see around the table, people have pens and they are making notes. There is no official transcript; there is no official note-taking. And to the best of my knowledge, in a meeting such as that, with comments such as that that were being made by the different agencies, what Senator Byrd was saying was a memo from some departments, and I don't know which it was, which said we are not allowed to do this. I personally find it very difficult to believe that anyone interpreted the comments that way, but apparently someone did. That is not unusual when you have got 20 people sitting around a table having a discussion such as we had.

But what I wanted to give you clearly is the fact that there is no orchestrated campaign, there is no authority to gag or muscle the agencies, and that our attempt is to get the most from them. Our attempt is to get their comments. Our attempt is to bring them to the table.

Mr. MCINTOSH. Let me explore that for a minute.

Mr. SANDERS. I just wanted to jump in, if I could ask the clerk how we are doing in terms of time?

The CLERK. Time is up.

Mr. MCINTOSH. May I ask unanimous consent to pursue this, Bernie?

Mr. SANDERS. How much longer do you think you will be?

Mr. MCINTOSH. I hope I can wrap it up in 5 minutes. I hope not much longer.

At that meeting, or previously or subsequently to it, was there an explanation to the agencies of the different legal effects of reviewing and participating in an interagency discussion that is not part of the written record in the rulemaking versus submitting comments in writing that would be part of the rulemaking?

Ms. KATZEN. Yes.

Mr. MCINTOSH. Which are the only comments that the Administrator is legally required to take into account in making her decisions and the only comments that the courts can consider when they review that rulemaking?

Ms. KATZEN. The question is a yes to the statement, was there an a discussion of it. Our discussion of it is different from your statement, and so I would want to comment on that as well.

Mr. MCINTOSH. OK.

Ms. KATZEN. I believe that I was one of several people, I think there was someone from Justice at one point, and there may have been someone from EPA—who stressed if there are facts upon which a decision is to be based, they must be in the record; those facts must be included in the record. So if someone had scientific data, if someone has information that would be a factual predicate for a finding or conclusion, it must be included in the record. It cannot come in through an interagency process.

For that reason, at the technical staff we reminded agencies that if you are putting in data, get it in the public record. And EPA——

Mr. MCINTOSH. That was at a later meeting?

Ms. KATZEN. It was, I believe, at an earlier meeting, at that meeting, and at a later meeting as well, because the questions would come up from time to time about the process. Each of the agencies wanted to participate in this process, and each of them thought it was desirable. They wanted to make sure, however, that they were complying with the law, and for that reason there was an exploration of these issues.

The qualification I would add is that policy considerations, as you know, do not necessarily have to be in the record to inform the judgment. Factual information does.

Mr. MCINTOSH. As I said, I am very concerned about this. We could launch a big investigation, but would you give us a list of who participated and any notes that you have available or your staff, so that we could get a flavor for that meeting?

Ms. KATZEN. I will tell you, I don't take notes. I chair the meeting, so I am sitting there listening most of the time.

Mr. MCINTOSH. I could ask you, would you ask all the participants to give you their notes, but what I would ask is, if you have any available to you or your staff has any notes, if you don't mind, any people in the White House.

One other question in this area, and that is, were there any discussions prior to that meeting with other officials in the White House or the Vice President's Office about the desire to express to the agencies this issue of whether to put comments into the rulemaking? I am trying to characterize it in a neutral way.

Ms. KATZEN. The conversations that I remember having were at the interagency review of the proposed rules stage, so this would have been in mid-November or late November—were very clear that the agencies had to have a forum, had to have the information, had to have the opportunity, and they were looking to me to establish that for them.

Other than that conversation, I can't recall anyone in either the Vice President's Office or in even the Chief of Staff's Office that had any discussion about whether or not agencies were to file comments in the formal record.

I can understand how you are concerned about this, because the rumors and the language that is used is, I think, disturbing. But is not true. And for that reason, I would hope by this long discourse to allay some of your concerns.

Mr. MCINTOSH. I appreciate you going into this with me. Real quickly, were there any discussions with Council of Economic Advisors? I knew they had some concerns about this regulation.

Ms. KATZEN. They did have concerns about the regulations. They had certain materials that they had generated, I think a lot of which has been submitted to you.

Indeed, you have seen many of the comments that have been generated by all of the Federal agencies and other White House offices on this rule. These were included when we produced our 3,900 pages of material in response to your request.

I don't recall any specific conversation with CEA on the issue of whether they should be on the record or part of the interagency process. I don't know that CEA has ever filed comments on the record. They have always participated in the interagency process. So I don't know that the issue would have come up.

Mr. MCINTOSH. OK. Good. Let me ask you if you could get us that list, and if you have any further recollections about this issue, go ahead and elaborate on them at that time to us.

I have no further questions. Everybody else seems to have left.

Mr. Barr, we sort of implied to Bernie we were going to wrap up with my questioning. Do you have any questions, and could we submit them in writing?

Mr. BARR. Sure. Certainly. Whatever the chairman pleases.

Mr. MCINTOSH. I think in trying to make sure we maintain this good working relationship with the minority, we will do that, because this is a dicey issue where we have very fundamental differences on substance. But if we can keep our process going well, it will work to everybody's advantage.

Let me say thank you to each of the participants on this panel for coming today, for waiting around as we finish this up. I appreciate it. We will be continuing to look into this issue. Thank you.

The hearing is adjourned. The committee stands adjourned.

[Whereupon, at 2:30 PM, the subcommittee was adjourned.]

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