

CLEAN AIR WORKING GROUP
STATEMENT ON OZONE NONATTAINMENT

Summary

The ozone nonattainment dilemma before EPA and the Congress is a complex issue. The Clean Air Act requires attainment of the health-based ozone standard by December 31, 1987, and provides for the imposition of sanctions on nonattainment areas. Many areas will not be in attainment by December 31, 1987, and some may never be in attainment.

Because public health is at issue, it is important to understand the nature and significance of the risk. Ozone levels above the health-based standard may cause temporary respiratory effects in a portion of the exposed population. Most nonattainment areas are in compliance over 99 percent of the time and, for less than 1 percent of the time, only a portion of a nonattainment area exceeds the standard. Therefore, not all individuals in nonattainment areas are exposed to ozone levels above the standard and, of those exposed, only the most sensitive may be affected. Since exceedences are generally limited to a small number of hours per year, the exposure risk is correspondingly reduced.

In considering the risk, it is appropriate to recognize the scientific uncertainties associated with our understanding of the ozone phenomenon. These include the statistical definition of attainment and our ability to monitor accurately and to model reliably.

A simple legislative extension of the ozone attainment date provides little relief for many metropolitan areas and much of industry. Even with an extension of the attainment date, sanctions can be imposed on many areas and industrial requirements in nonattainment areas could become more stringent. The resolution of the ozone dilemma, whether regulatory or legislative, should conform to the following criteria:

- * Recognize past efforts when considering sanctions
- * Provide for growth and development
- * Tailor requirements to the individual nonattainment areas
- * Require continued improvements in air quality toward attainment
- * Impose the most cost effective measures

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OZONE

Ozone is formed when hydrocarbon and nitrogen oxide emissions react in sunlight. Ozone is primarily controlled by reducing hydrocarbon emissions. The role of the other ozone precursor, nitrogen oxide, is not fully understood. Nitrogen oxide emission reductions may reduce, or in some circumstances even increase, the formation of ozone. The one-hour ambient air quality standard for ozone, set to protect public health with an adequate margin of safety, is 0.12 ppm. Exposure to ozone above this level may cause temporary respiratory effects in a portion of the exposed population. High ozone concentrations may also cause crop yield loss and forest damage.

THE CLEAN AIR ACT

Originally, the Clean Air Act required all areas to attain primary ambient air quality standards in the 1970s. The Clean Air Act amendments of 1977 extended the attainment date up to December 31, 1982 and also made provisions for an additional extension up to December 31, 1987 for areas that qualified. Areas in 31 states received the longer extension. All areas of the country are required to attain the ozone standard, or sanctions can be imposed on the nonattainment areas. Sanctions include a moratorium on the construction or modification of hydrocarbon sources of 100 tons per year or more, and the cutoff of air planning grants, sewer construction grants and highway funds.

STATE IMPLEMENTATION PLANS (SIPs)

EPA-approved SIPs recognized the status of an area's nonattainment and imposed requirements on sources within the area that were designed to achieve attainment. Most areas have implemented their existing SIP requirements. However, some areas with approved SIPs, that have implemented their SIP requirements, will not achieve attainment by December 31, 1987. There are other areas with approved SIPs that have not fully implemented the SIP requirements and will not be in attainment by December 31, 1987. About 20 areas do not have EPA-approved SIPs and some of these areas are not able to design a SIP that will show attainment by December 31, 1987.

EPA NONATTAINMENT POLICY

EPA's plan to deal with the ozone nonattainment situation, using existing authorities under the Clean Air Act, is to use the most current monitoring data to determine nonattainment, to require continued progress toward attainment, and to require new SIPs where attainment will not be achieved by December 31, 1987. EPA's sanctions policy, adopted in 1983, would not impose penalties on areas with approved SIPs that have implemented their SIP requirements, even though they failed to achieve attainment by December 31, 1987. For at least those areas that do not have an approved SIP or have not implemented all measures in their SIP, it appears EPA will impose a construction ban and possibly other sanctions. EPA expects additional litigation to challenge the lawfulness of their nonattainment policy and looks to Congress for guidance.

NONATTAINMENT AREAS

An area is considered nonattainment if any one monitor in the area records ozone levels above the standard more than three separate hours, over three different days, during a rolling three-year period. Thus, a single monitored hour above the standard is designated by EPA to be a full day of nonattainment for the entire area.

EPA has designated 76 areas nonattainment based on 1983 through 1985 ozone monitoring data. Fifteen of these areas experience concentrations of 0.17 ppm or higher. The balance are below this level and most are marginally out of compliance. Los Angeles, by far the worst area for ozone, is expected to exceed the standard during 40 days each year at levels up to 0.36 ppm. Houston, the next worse area, is expected to exceed the standard during seven days per year at levels up to 0.25 ppm. Detroit is expected to exceed the standard one day a year at a level of 0.13 ppm and actually exceeded the standard only one hour in the two year period 1984 - 1985. There are many other areas with similar nonattainment patterns in these same two years: Cincinnati had no hours of nonattainment; Washington, D.C. had three hours; Cleveland seven; Pittsburgh none and Denver one.

With the exception of Los Angeles, air quality in nonattainment areas is below the ozone health-based standard well over 99 percent of the time. Less than 1 percent of the time, some portions, but not all, of a nonattainment area will record ozone levels above the standard. Clearly, not everyone in a nonattainment area is exposed to the higher ozone levels during those hours each year that portions of the area may exceed the standard. And, of those individuals actually exposed to ozone levels above the standard, only a portion are affected.

In June of 1987, EPA will review the nonattainment status of all areas using 1984 through 1986 data. The use of more current data is expected to reflect air quality improvements through lower ozone concentrations in most areas and a reduction in the number of days or total hours per year the standard is projected to be exceeded. This should reduce the number of nonattainment areas.

SCIENCE OF OZONE

The process used to determine attainment of air quality standards is not precise. The analytical accuracy of monitoring and the reliability of modeling must be considered when making attainment decisions. Flawed or unusual data should be statistically edited to prevent one or more explainable high data points from causing nonattainment for three years. EPA should exercise the maximum regulatory flexibility, consistent with good science, when considering attainment.

It is important to recognize the fact that the science of ozone is not fully understood and models still are being developed to improve their ability to predict how source emission reductions contribute to reduced ozone formation. Moreover, sources in attainment as well as nonattainment areas may contribute to the nonattainment of downwind areas due to the atmospheric transport of ozone and its precursors. Also, there are no major uncontrolled sources; rather, there are many small sources whose control or elimination would make, at best, modest contributions towards attainment. There are few, if any, cost effective control requirements that can be imposed on these sources. For these reasons, strategies to force attainment in some areas could require significant lifestyle changes and restrictions on community growth and industrial development. Examples of more Draconian measures that can be considered are alternative driving days, forced use of mass transit and costly controls on wineries, bakeries, dry cleaners and other small emission sources.

CRITERIA FOR A SOLUTION

Whether regulatory discretion is exercised or legislation is considered to resolve the ozone nonattainment dilemma, the following criteria should be observed:

* Recognize past efforts when considering sanctions

Many nonattainment areas with approved SIPs have made honest and costly efforts to achieve attainment but failed to do so even with implementation of all SIP requirements. Also, many areas have made substantial progress but do not have approved SIPs because they could not show attainment by December 31, 1987. These areas should not be penalized because the scientific understanding of ozone is incomplete. These efforts should be reflected in any EPA sanction policy.

* Provide for growth and development

Restrictions on community growth and development or forced lifestyle changes should be avoided. Communities need to provide for growth. Flexibility must be maintained in the regulatory process. Measures such as emissions trading, that allow for environmentally compatible industrial development and modernization, should be retained and expanded.

* Tailor requirements to individual nonattainment areas

SIPs should tailor future requirements to the specific needs of individual nonattainment areas. The criteria, methodology and evaluation of data used to determine ozone nonattainment should be refined to more accurately reflect actual levels of ozone exposure. It is essential that the degree of response is comparable to the degree of the problem. Uniform national requirements should be avoided to eliminate their imposition in areas where they are not needed.

* Require continued improvement in air quality toward attainment

Nonattainment areas should continue to plan for attainment by adoption of reasonable measures designed to reach attainment as soon as practicable. This planning will reassure individuals in nonattainment areas that efforts are being implemented to protect public health. It should also provide certainty for emission sources, since once controlled, further ratcheting of controls should not be required, thus avoiding the moving target of forever tightening requirements.

* Impose the most cost effective measures

Sources in nonattainment areas should not be controlled, nor should new requirements be imposed on already controlled sources, unless the requirements are cost effective and make a positive and measurable contribution toward attainment.

The Clean Air Working Group (CAWG) is comprised of over 100 representatives of the U.S. business and industrial community in Washington, D.C. In addition to individual companies, most industry trade associations and key organizations representing business and industry in general, are members of CAWG. The purpose of the Group is to coordinate the business community's response to Clean Air Act legislative activities.