

TO: Distribution

FROM: J. A. Hall
DATE: October 29, 1991

Interoffice
Communication

VISTA

SUBJECT: SUMMARY OF 1990 CLEAN AIR ACT

Some of you should find informative John Stokes' synopsis of the Clean Air Act. It is likely there will be far reaching effects from this Act on several of our businesses, whether it is feedstock cost and quality or business opportunities and challenges.

Depending on responses to this overview, Vista may wish to appoint an individual or team to analyze and report on developments and implications of this Act.


J. A. Hall

/sfl

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Interoffice
Communication

TO: J. A. Hall
FROM: J. P. Stokes
DATE: October 18, 1991
SUBJECT: 1990 CLEAN AIR ACT AMENDMENTS

VISTA

Per your request, I have prepared the following summary of the 1990 Amendments (Amendments) to the Clean Air Act (CAA). This summary begins with an overview of the history of the CAA and the purpose and structure of the Amendments. This is followed by a more in depth discussion of applicable Titles from the Amendments.

Where possible I have attempted to infer the commercial implications of the Amendments to industry and society. I have not attempted to define the operational or economic impacts to industry resulting from the Amendments. These effects are of such significance they deserve focussed attention from Vista's Environmental, Manufacturing, and Senior Management.

History of CAA

The original Clean Air Act was passed by Congress in 1967. Since then the issue of clean air has been readdressed four times through amendments or additional Acts in 1970, 1974, 1977, and now again in 1990. These enhancements to the original CAA addressed better definition of air quality, expanded regulatory capability of the government, and energy policy concerns. The Amendments passed in 1990 will have far reaching effects, not only on American industry, but on how individuals lead daily lives as well.

Overview of the 1990 Amendments

Government's attempt to improve air quality in the U.S. has been centered around National Ambient Air Quality Standards (NAAQS). NAAQS define short and long term exposure levels for six pollutants, below which no detrimental effects are experienced by humans or the environment. The six pollutants are Ozone, Carbon Monoxide, Particulate Matter, Sulphur Dioxide, Nitrogen Oxides, and Lead.

The 1990 Amendments provide legislation to reduce pollution in areas which do not meet these standards (nonattainment areas). The responsibility for improving air quality so that these NAAQS are met is borne by the states. The mechanism for achieving compliance is the State Implementation Plan (SIP).

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Nonattainment areas for Ozone are classified as marginal, moderate, serious, severe, and extreme. There is only one extreme nonattainment area, Los Angeles. Eight areas are classified as severe - Baltimore, Chicago, Houston, Milwaukee, Muskegon, MI, New York, Philadelphia, and San Diego.

The timetable for implementing the Amendments and the severity of action required is a function of the classification of the nonattainment area.

Titles I-VII of the Amendments will now be addressed in more detail. Titles VIII-XI, which deal with outer continental shelf drilling, clean air research, disadvantaged business concerns, and lost job compensation will not be addressed.

Title I - Provisions for Attainment and Maintenance of National Ambient Air Quality Standards

This section of the Amendments is perhaps the most far reaching of all. It requires states to develop SIPs which will result in nonattainment areas achieving the NAAQS standards. For Ozone, marginal areas must reach attainment within three years, extreme areas within twenty years.

The primary focus of this Title is to improve air quality through additional controls on industrial facilities. Sources of industrial air pollution will be categorized as to amount and type. Previously enacted legislation requiring installation of Reasonably Available Control Technology (RACT) is now extended to smaller sources. Threshold levels for RACT are now lower in nonattainment areas.

New sources of air pollution from expansions or new construction must be offset by other reductions in the nonattainment area. In marginal areas the offset ratio is 1.1:1, while in extreme areas it is 1.5:1. In addition, all new sources must meet the Lowest Achievable Emissions Rate (LAER) as defined by the EPA.

This Title also requires all gas stations in nonattainment areas which sell at least 10,000 gallons per month to install vapor recovery systems.

Title II - Mobile Sources

This Title addresses both tailpipe and evaporative emissions from cars, trucks, and buses and will most seriously affect the auto and petroleum refining industries. The new standards for emissions will be achieved through a

combination of technology - on board vapor recovery, cold start catalyst - and improved fuels - clean fuels, oxygenates, and reformulated gasoline.

Beginning with the 1994 models, all cars and light-duty trucks must have on board diagnostics systems to monitor the performance of emissions reduction equipment. The warranty on all emissions related equipment must be extended to eight years or 80,000 miles in 1995.

By November 1, 1992, only gasoline with a minimum oxygen content of 2.7% can be sold in the cities with the worst CO nonattainment. This is what is prompting the rush to build MTBE and similar oxygenate plants.

Reformulated gasoline, meeting new specifications for oxygen content, aromatics, benzene, VOCs, and other hazardous air pollutants must be sold in the nine serious and extreme Ozone nonattainment areas by 1995. Marketing reformulated gasoline selectively in these nine areas may prove to be impossible because of distribution pipelines, terminals, and other logistical constraints. Most areas of the country may end up with higher priced reformulated gasoline.

This Title also requires that vehicle fleets in certain nonattainment areas meeting specific qualifications convert over to clean fuel burning. Clean fuel is loosely defined as methanol, ethanol, natural gas, or reformulated gasoline. The percentage of the fleet requiring clean fuel is stepped up each year.

Another aspect of the Title requires that 150,000 new cars sold in California be "clean-fueled vehicles" starting in 1996. The quantity increases to 300,000 in 1999. This is a pilot program and, if successful, will most likely be extended to other parts of the country.

Other miscellaneous issues addressed in the Title are: the banning of leaded gasoline by December 31, 1995; reduction in the sulfur content of diesel fuel by October 1, 1993; and reduction of particulate emissions from urban buses by model year 1994.

Title III - Air Toxics

As mentioned earlier, the CAA prior to the Amendments addressed improved air quality through the use of NAAQS. However, since NAAQS existed for only six

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pollutants, there was general concern that the CAA needed to control the emission of many other toxic substances. This Title establishes a long list of toxic pollutants and requires the EPA to regulate their emission.

Industry will be required to reduce emissions by installing Maximum Achievable Control Technology (MACT). MACT standards for different types of industry will be promulgated by the EPA over the next decade and their installation is anticipated to require enormous investment.

Even after installation of MACT, certain facilities may require further reduction if the remaining emissions are considered toxic to exposed individuals.

Title IV - Acid Rain

This Title applies almost exclusively to power plant emissions of Sulfur Dioxide and Nitrogen Oxides. 111 plants have been targeted in the initial regulations and will have to reduce emissions through enhanced control technology or fuel selection.

There is a commercial aspect to the Title as well. Emission "allowances" have been established to gradually cut back on total emissions. Power plant operators must decide whether to purchase additional allowances to be in compliance or invest capital in control technology.

Title V - Permits

An enhanced permit program was established in the Amendments because of a historical lack of consistency and overlapping-controls in the variety of programs currently in place.

Industry must determine which of its sources exceed the threshold level triggering permit application. Once issued, the permit will dictate the level of emission from the source as well as require extensive record keeping. Sources going through an emission reduction as part of the CAA will have a compliance schedule spelled out as well in the permit.

New construction will require permitting before ground is broken, most likely increasing the lead time for these projects.

Permit fees of at least \$25 per ton emitted will support administration of the program.

Title VI - Stratospheric Ozone Protection

This Title regulates the production and use of chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl chloroform, and hydrochlorofluorocarbons (HCFCs). All must be phased out of production by 2000 except the last two, which must be phased out by 2002 and 2015 respectively.

Businesses which maintain, service, or repair refrigeration equipment will have to install recycling and collection equipment to control emissions.

It will be more difficult for individuals to recharge their own car air conditioners; sale of refrigerant in containers less than 20 pounds will be prohibited in 1992. 1994 model year cars will not be able to use ozone-depleting chemicals in their refrigeration systems.

Title VII - Enforcement

Enforcement has always been a part of environmental legislation. However, since the CAA was last amended in 1977, its enforcement provisions were far behind today's practices in other legislation. Consequently, the Amendments give the EPA far reaching authority to ensure new regulations are being met.

The EPA no longer has to involve the Justice Department or initiate a court proceeding to impose civil penalties. Fines up to \$25,000 per day can be invoked for violation of any requirement or rule imposed by the CAA.

The EPA can also issue field citations, like a ticket, imposing penalties up to \$5,000 per day of violation.

The Amendments convert knowing violation of almost every requirement into a felony. Fines for individuals of up to \$250,000 and imprisonment of up to five years can be imposed.

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What started as a summary of the CAA has ended up in a fairly long dissertation on the subject. And I do not even come close to touching all of the aspects and issues covered by the legislation.

Please contact me if you want to discuss any of this further.



John P. Stokes

References

1. McKenna & Cuneo - Legislative Alert, November 12, 1990, "The Clean Air Act Amendments of 1990".
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