

Reviewing The Clean Air Act

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It is time to take stock of the Clean Air Act and more particularly the Clean Air Amendments of 1970.¹ The Act mandates extensive state and local air pollution control activities designed to achieve federal air quality standards. In addition, it authorizes direct federal standard setting for automobiles, new stationary facilities, fuel additives, and other pollutant sources. The Act is thus the charter for achieving air quality through governmental action at all levels.² After more than three years of intense activity and highly successful beginnings under the 1970 Amendments, we have had sufficient experience with the Act to assess how well it will serve us in implementing future clean air efforts. Congress and the executive branch seem to agree the time for reassessment has come.³ For reasons that often differ substantially from those held by many people in government, most of American industry also concurs. Environmentalists, wary and embattled because of recent efforts to compromise their cherished goals in the name of energy needs, view most suggestions for changing the law with skepticism or hostility.

Several factors combine to make this an auspicious time to address seriously the need for specific improvements in the Clean Air Act. The chief reason is that we are fast approaching the mid-1975 statutory date for attainment of the national "primary" or health-based

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1. 42 U.S.C. §§ 1857-58(a) (1970), amending 42 U.S.C. §§ 1857-571 (Supp. V, 1970). In all following notes, the term "Clean Air Amendments" refers to the Clean Air Act, 42 U.S.C. §§ 1857 *et seq.*, as amended through 1970.

2. With limited exceptions, the Clean Air Act preserved the authority of states and their subdivisions to adopt air pollution control requirements more stringent than those mandated by federal law. Clean Air Amendments § 116, 42 U.S.C. § 1857d-1 (1970).

3. The congressional committees with responsibility for the Clean Air Act—the Senate Committee on Public Works and the House Committee on Interstate and Foreign Commerce—have asked for and received from the administration proposals for amending the Act and have indicated their intention to hold hearings on such proposals during 1974 or early 1975. See letter from EPA Administrator Russell E. Train to the Speaker of the House of Representatives and the President of the Senate, transmitting proposed amendments to the Clean Air Act, Mar. 22, 1974 [hereinafter cited as Train Letter]. See also Comment, *IV: The Automobile Controversy—Federal Control of Vehicular Emissions*, 4 *ECOLOGY* L.Q. 661 (1975) [hereinafter cited as *The Automobile Controversy*].

ambient air quality standards which the Environmental Protection Agency (EPA) established in 1971.⁴ It is now clear that some facilities⁵ and metropolitan areas will need additional time, even beyond the limited extensions which the current law permits.⁶ Several metropolitan areas cannot achieve ambient standards for pollutants associated with motor vehicles by 1977 without serious social and economic disruption⁷ which would result from such draconian measures as gas rationing to produce a drastic reduction in automotive traffic.⁸ It would not be responsible public policy to perpetuate further regulatory measures, necessitated by current law, that cannot and should not be enforced in their present form. Without new legislation, there will be continued and understandable anxiety, and contempt for "the law" among large segments of the population.

The urgent need to establish some deliberate public policy to deal with the "clean fuels deficit"⁹ provides another reason for considering changes in the Clean Air Act at this time. The emission limitations established by state and local governments, prior to or as part of state implementation plans required under the 1970 law, include restrictions on the amount of sulfur oxides that may be emitted by facilities burning fossil fuels. These limitations must be sufficiently stringent to assure attainment of the national primary air quality standard by 1975 but, pursuant to the law's "states' rights" policy,¹⁰ many of them are even more stringent.

Largely because of the "overkill" in some sulfur oxide emission limitations, particularly for power plants, there is a demand for low-sulfur fuels that substantially exceeds available domestic supplies. If these limitations remain unchanged, it will be necessary to increase significantly imports of low-sulfur oil, which is largely available from the very Middle Eastern sources that recently demonstrated the dangers of excessive reliance on foreign oil. A temporary relaxation of emission limitations could, without violating health-related primary standards, enable utilities to use more than 100 million additional tons

4. See Clean Air Amendments § 109, 42 U.S.C. § 1857c-4 (1970); 36 Fed. Reg. 8186 (1971).

5. See, e.g., United States Environmental Protection Agency, Report of the Hearing Panel, National Public Hearings on Power Plant Compliance with Sulfur Oxides Air Pollution Regulations (1973).

6. See Clean Air Amendments §§ 110(e), (f), 42 U.S.C. §§ 1857c-5(e), (f) (1970).

7. See ENVIRONMENTAL QUALITY: THE FOURTH ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 159 (1973) [hereinafter cited as CEQ Report].

8. For a discussion of transportation control plans see *The Automobile Controversy*, *supra* note 3.

9. See CEQ Report, *supra* note 7, at 161-62.

10. Clean Air Amendments §§ 110, 116, 42 U.S.C. §§ 1857c-5, 1857d-1 (1970).

per year of domestic high-sulfur coal instead of imported oil.¹¹ The uncertainty associated with future supplies of Middle Eastern oil has created some doubt that primary standards can be achieved nationwide by 1975 unless the "non-degradation" requirements are relaxed.¹²

EPA has encouraged states to reduce the "overkill" in their emission limitations to assure attainment of the primary sulfur oxide standard throughout the country rather than to cause violations in some areas by excessive use of clean fuels in others. However, since the "clean fuels deficit" involves national security and energy policy issues not perceived in 1970, in the context of chronic energy shortages, it is time for Congress to reexamine the situation. It may decide that no change in the Clean Air Act is needed, but it should at least review the facts and available alternatives.

A third argument for congressional action in 1974 is the need to strengthen EPA's enforcement arsenal. Over the next few years, EPA must be able to participate more effectively with the states to assure compliance with emission limitations and other control strategies. The agency is now limited in most cases to seeking criminal penalties against violators of implementation plans or EPA compliance orders.¹³ Given the opportunity to seek more expeditious civil penalties in appropriate cases, or to impose civil fines subject to judicial review, EPA could deter potential violators much more effectively.¹⁴

When Congress considers possible Clean Air Act amendments, two issues are likely to be debated with particular emotional and philosophical intensity—the use of "supplementary" or "alternative" control measures (intermittent controls and tall stacks), and the prevention of "significant deterioration" of already clean air.¹⁵

Although the matter is not free from doubt, current case law seems to require that, whenever possible, polluting facilities employ constant or continuous emission reduction systems, rather than intermittent or dispersive techniques.¹⁶ Quite logically, compliance with ambient air quality standards is determined at ground level, where adverse effects of excessive pollution will occur. With respect to sulfur

11. The President's April 18, 1973 Message to the Congress on Energy, 9 Presidential Documents 389, April 23, 1973.

12. For a discussion of non-degradation see Comment, VI: *Sierra Club v. Ruckelshaus—On A Clear Day . . .*, 4 *ECOLOGY L.Q.* 739 (1975) [hereinafter cited as *On a Clear Day*].

13. Clean Air Amendments §§ 113, 205, 211(d), 42 U.S.C. §§ 1857c-8, 1857f-4, 1857f-6c(d) (1970).

14. For a discussion of federal and state enforcement see Comment, II: *State Implementation Plans and Air Quality Enforcement*, 4 *ECOLOGY L.Q.* 595 (1975).

15. For a discussion of no significant deterioration see *On a Clear Day*, *supra* note 12.

16. *NRDC v. EPA*, — F.2d —, —, 6 ERC 1248, 1256-57 (5th Cir. 1974).

oxide emissions, electric utilities and others argue they should be allowed to rely on unusually tall smokestacks that allow air currents to disperse emissions sufficiently to prevent violation of ambient standards at ground level.¹⁷

This tall-stack technique of regulating sulfur oxide pollution is less costly and consumes less energy than the principal alternative—flue gas desulfurization (FGD), claimed by many in the industry to be technologically unproven and unreliable. The tall-stack strategy disperses pollutants over a wide area but does not appreciably reduce the total amount of emissions. This technique can sometimes meet the ambient standards in a technical sense by diluting rather than curbing emissions, but it does not comply fully with the spirit or the letter of *Sierra Club v. Ruckelshaus* in which the Clean Air Act is interpreted as requiring minimization.¹⁸

It has also been argued that polluters should be allowed to employ varying emission controls to take advantage of variations in meteorological conditions that can affect significantly the ambient air impact of a given amount of emissions. Such intermittent control techniques would not require a constant emission standard designed to prevent ambient standard violations under all meteorological conditions; rather, they would vary with the weather, allowing increased emissions to the maximum extent consistent with ambient standards during relatively favorable meteorological conditions.

On the other hand, these alternative control measures carry their own difficulties. Intermittent controls are quite difficult to enforce except when relatively isolated facilities are involved. Furthermore, both intermittent controls and tall stacks add substantially to the total atmospheric sulfur oxide concentration and contribute to destructive but hard-to-quantify "acid rain."¹⁹

Another concern with such measures has been sharply focused by recent EPA health effects studies. It is now apparent that the most serious sulfur emissions problem probably is not sulfur oxides themselves, which are formed by the combustion process, but rather the fine particulate sulfates into which oxides of sulfur may be converted in

17. That is, taller than the normal engineering practice of building stacks and tall enough so there is no ground level effect from the atmospheric downwash eddies or from wakes that may be caused by the facility itself or by nearby structures or terrain obstacles.

18. 344 F. Supp. 253, 4 ERC 1205 (D.D.C. 1972), *aff'd mem.*, 4 ERC 1815 (D.C. Cir. 1972), *aff'd by an equally divided court sub nom.*, *Fri v. Sierra Club*, 412 U.S. 541, 5 ERC 1417 (1973); *NRDC v. EPA*, — F.2d —, 6 ERC 1248 (5th Cir. 1974).

19. See 38 Fed. Reg. 25697 (1973). For an international perspective see Royal Ministry for Foreign Affairs and Royal Ministry of Agriculture, *Air Pollution Across National Boundaries: The Impact on the Environment of Sulfur in Air and Precipitation, Sweden's Case Study for the United Nations Conference on the Human Environment* (1971).

the stack or the atmosphere.²⁰ Sulfates are an areawide, relatively long-lasting phenomenon, similar to photochemical oxidants ("smog"). Substantial areas of the nation, particularly in the heavily populated Northeast, experience sulfate levels at or above the concentrations which preliminary data suggest are deleterious to human health. Although the process of sulfate formation is not yet fully understood, there is good reason to believe that when EPA establishes ambient sulfate standards within a few years, they will require reductions in sulfur emissions substantially stricter than those presently in force. Dispersive or intermittent control techniques simply will not be adequate.

Since considerable reductions of sulfur emissions beyond those now required will inevitably be mandated over the next decade, EPA has taken the position that now is a particularly bad time to encourage *indefinite* use of supplementary or alternative control systems. Rather, the agency maintains, we should keep the pressure on the utility industry to improve and install FGD technology. However, since it will take time to phase in the new and expensive FGD technology, EPA believes that alternative control systems should be used on an interim basis as needed.²¹

Although the Clean Air Act establishes a comprehensive and specific standard-setting scheme,²² the judiciary has construed it to allow no significant deterioration of air quality even in "clean" areas that are well within both primary and secondary standards.²³ This requirement is based upon one of the Act's stated purposes, "to protect and enhance the quality of the Nation's air resources."²⁴

Unfortunately, the only court to write an opinion in the significant deterioration case did not in any way define what "significant deterioration" means. This leaves open the issue of whether the phrase means (1) that some precise air quality deterioration may not be exceeded in any clean area or (2) that what deterioration is "significant" varies according to a number of environmental, land-use, economic growth, and resource availability factors which must be balanced in some rational way. If the second interpretation is valid, then it

20. A significant source of this information is EPA's ongoing Communities Health Effects Surveillance Studies (CHESS) program.

21. See Train Letter, *supra* note 3.

22. The Act requires EPA to set ambient air quality standards based on health and welfare, performance standards for emissions from new or modified stationary sources, and automotive emission standards reflecting a ninety percent reduction from 1970 levels. Clean Air Amendments §§ 109, 111, 202, 42 U.S.C. §§ 1857c-4, 1857c-6, 1857f-1 (1970).

23. *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253, 4 ERC 1205 (D.D.C. 1972), *aff'd mem.*, 4 ERC 1815 (D.C. Cir. 1972), *aff'd by an equally divided court sub nom.*, *Fri v. Sierra Club*, 412 U.S. 541, 5 ERC 1417 (1973). For a discussion of this case see *On a Clear Day*, *supra* note 12.

24. Clean Air Amendments § 101, 42 U.S.C. § 1857 (1970).

poses difficult questions concerning the extent to which the federal government must or may second-guess state decisions arrived at through an orderly and procedurally fair process.

EPA is presently developing regulations which would define significant deterioration relative to specific areas. The definition would be a matter of state responsibility with EPA playing a limited role. Since implementation of any policy of no significant deterioration has major economic, social, and developmental ramifications, it may be that Congress should explicate for the agency and the courts its position on the issue. It could do so before or after EPA promulgates its regulations and before or after the courts review those regulations, as they almost certainly will. Congressional failure to act will be tantamount to either buck-passing on a very volatile issue or tacit satisfaction with the outcome of the administrative and/or judicial processes.

It should be recognized that congressional review of the Clean Air Act will involve judgments on several fundamental issues of legislative policy and legislative approach to environmental regulation that go beyond the substantive clean air issues involved. One such issue is the extent to which seemingly single-purpose legislation such as the Clean Air Act should subordinate and subsume other social issues such as land use or growth limitations. Critics of the Act claim that it unreasonably demands clean air to the detriment of conflicting social and economic considerations. For example, in order to achieve clean air EPA has promulgated regulations pursuant to the Act that may literally eliminate automobile use in Los Angeles for at least several months each year by 1977, should that be necessary to achieve the photochemical oxidant ambient standard. A more pragmatic view of the Act, however, suggests that Congress simply wanted to ensure that maximum cleanup was achieved and that the consequences of an unqualified commitment to clean air were explored before the Act's limited provisions for "balancing" clean air with other values were expanded.

Also at issue is the extent to which legislation should seek to force technological development and the various ways in which it can accomplish that end. The Act most clearly demands technological development in its provisions limiting emissions from 1975 and subsequent model-year motor vehicles.²⁵ Congress estimated the degree of auto emission control necessary to solve the most severe motor vehicle air quality problems and required, through strict emission standards, attainment of that level of control within four to six years after enactment.

25. *Id.* § 202, 42 U.S.C. § 1857f-1.

The results of this legislative approach cannot be assessed fully as yet. It seems clear that the congressional action stimulated unprecedented effort by the auto industry to improve emission controls, although some have argued persuasively that the statutory deadlines set for the required technological advances may have produced suboptimal technology (the oxidation catalyst-based system) by locking the industry into the conventional internal combustion engine.²⁶ According to this argument, had auto manufacturers been given several additional years to meet the 90 percent reduction goal they might have had the lead time and flexibility needed to pursue more aggressively, alternatives such as the stratified-charge engine or perhaps the Rankine-cycle steam engine—systems which some contend are much more reliable and effective than catalyst systems. An equally plausible argument is that a substantially later deadline for the auto standards would have produced a slower pace of activity in the industry with roughly the same technological progress, only years later.

A third fundamental strategic and policy issue is how to achieve optimum interaction among the various levels of government—federal, state, local, and regional—so that each plays important roles in controlling air pollution. In large measure, the federal orientation of the 1970 law arose from the general recognition that state and local governments had in many instances failed to achieve acceptable progress towards cleaner air.²⁷ Accordingly, the 1970 law established a control strategy that requires state or local action pursuant to extensive federal legislative and regulatory rules, with the ultimate sanction of federal regulation or enforcement when state or local governments balk or falter. As part of this political compromise, states were given much leeway to impose air standards more stringent than federal law. This basic approach seems undeniably sound, but a number of state and local officials, regulated industries, and ordinary citizens feel that the Clean Air Act has created too great a federal “big brother” phenomenon and that communities should be given more latitude to decide how and when to achieve more broadly stated federal goals. There is growing recognition that if regulations impacting heavily on people’s lifestyles are developed too far away from the “grass roots,” the public will neither support nor accept them.

While some environmentalists believe the Clean Air Act is sacred

26. See, e.g., National Academy of Sciences, Committee on Motor Vehicle Emissions, Report to EPA and the Congress under Section 202(c) of the Clean Air Amendments of 1970, Feb. 12, 1973. For a discussion of the internal combustion engine and alternatives see *The Automobile Controversy*, *supra* note 3.

27. Congress also had an economically-based concern that national industries should face relatively similar treatment from clean air regulators wherever their facilities were located.

and that any talk of further amendments is heresy, some industrialists and commercial interests believe the law is unacceptably disruptive and that it takes "this clean-air thing much too far." Although experience with the 1970 Amendments has demonstrated the need for some limited modifications, and at least for congressional reevaluation of some basic issues presented by the law, the Clean Air Act is overwhelmingly sound legislation. It needs a checkup and probably some minor corrective surgery, but no significant transplants or amputations are justified.