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THE 1977 CLEAN AIR ACT AMENDMENTS:
A TACTICAL RETREAT FROM THE
TECHNOLOGY-FORCING STRATEGY?

*BRUCE M. KRAMER**

Environmental concerns, long neglected, merit high priority, and Congress properly has made protection of the public health its paramount consideration. . . . But the shutdown of an urban area's electrical service could have an even more serious impact on the health of the public than that created by a decline in ambient air quality. The result apparently required by this legislation in its present form could sacrifice the well-being of a large metropolitan area through the imposition of inflexible demands that may be technologically impossible to meet and indeed may no longer even be necessary to the attainment of the goal of clean air.

I believe that Congress, if fully aware of this draconian possibility would strike a different balance.¹

The Clean Air Act of 1970 was bold and innovative in its approach toward achieving a goal of health-protecting air quality.² New and

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1. *Union Electric Co. v. EPA*, 427 U.S. 246, 271-72 (1976) (Powell, J., concurring).

2. 42 U.S.C. § 1857 (1970). The 1970 Amendments, Pub. L. No. 91-604, 84 Stat. 1676 (1970), were actually amendments to the 1967 Air Quality Act, Pub. L. No. 90-148, 81 Stat. 485 (1967). In reality the amendments so drastically and completely changed the earlier act that they are referred to as the 1970 Clean Air Act. The Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (1977), in addition to making major additions and deletions from the 1970 Amendments, recodified the entire statute at 42 U.S.C. §§ 7401-7642. The placement of the entire 1970 Amendments within one number, 1857, had required an unnecessarily complex system of

radical tactics and strategies were utilized to attack the nation-wide problem of air pollution. A much greater role was mandated for the federal government to overcome a perceived state indifference to the health endangering aspects of air pollution. Despite these salutary aspects, the 1970 Amendments were complex, imprecise, inconsistent and incomplete. In several instances the strategies developed were the product of a three-month Conference Committee, leading to a bill very different in many respects from both the House and Senate proposals.³ The result has been a veritable barrage of comments, decisions, and interpretations by the courts,⁴ by Congress,⁵ and by academicians⁶ debating the various strategies employed by the 1970 Amendments.

letter and subsection citation. Citation to the Clean Air Act prior to 1977 will include the section of the 1970 Act, its 42 U.S.C. § 1857 citation, and conclude with the new citation at 42 U.S.C.A. §§ 7401-7642 (West Supp. 1977).

3. See Kramer, *The 1970 Clean Air Amendments: Federalism in Action or Inaction*, 6 TEXAS TECH. L. REV. 47, 66-67 (1974) [hereinafter cited as Kramer I].

4. See, e.g., *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976); *Hancock v. Train*, 426 U.S. 167 (1976); *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975); *Buckeye Power Inc. v. EPA*, 525 F.2d 80 (6th Cir. 1975) [hereinafter cited as *Buckeye Power II*]; *Buckeye Power Inc. v. EPA*, 481 F.2d 162 (6th Cir. 1973) [hereinafter cited as *Buckeye Power I*]; *Duquesne Light Co. v. EPA*, 522 F.2d 1186 (3rd Cir. 1975), *vacated and remanded*, 427 U.S. 902 (1976) [hereinafter cited as *Duquesne Light II*]; *Duquesne Light Co. v. EPA*, 481 F.2d 1 (3rd Cir. 1973), *vacated and remanded*, 427 U.S. 902 (1976) [hereinafter cited as *Duquesne Light I*].

5. Senator Muskie estimated that the Senate Subcommittee on Environmental Pollution and its predecessors had held over 60 days of oversight hearings on the 1970 Amendments. S. REP. NO. 127, 95th Cong., 1st Sess. 19-20 (1977) [hereinafter S. REP. NO. 127]. Between 1975 and 1977 the Subcommittee held 18 days of hearings, 58 days of mark-up sessions, heard 138 witnesses and compiled 9,470 pages of testimony in preparing the 1977 Amendments. *Id.* at 1. See, e.g., *Hearings on the Implementation of the Clean Air Act Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 94th Cong., 1st Sess. pts. 1-3 (1975); *Hearings on the Implementation of Transportation Controls Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 93rd Cong., 1st Sess. pts. 1-3 (1974); *Hearings Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 93rd Cong., 1st Sess. (1973).

6. See, e.g., Kramer, *Economics, Technology, and the Clean Air Amendments of 1970: The First Six Years*, 6 ECOL. L. Q. 161 (1976) [hereinafter cited as Kramer II]; Kramer I, *supra* note 3; La Pierre, *Technology-Forcing and Federal Environmental Protection Statutes*, 62 IOWA L. REV. 771 (1977); Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196 (1977); Stewart, *The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decisionmaking: Lessons from the Clean Air Act*, 62 IOWA L. REV. 713 (1977).

Perhaps the most innovative and most strongly opposed technique utilized by the 1970 Amendments was the concept of "health-based" standards as the vehicle for a technology-forcing strategy.⁷ A technology-forcing strategy using health-based standards means that protection of the public health can be the sole consideration in either setting an appropriate standard or in attaining it. This obviously excludes from consideration any economic or technological feasibility issues. Similarly, a health-based standard does not consider other social ramifications of its implementation. Economic, social or technological factors are relevant only in setting standards where the health-based standards have already been attained or where a variety of alternative emission control strategies would each achieve attainment within the designated time limits. This strategy necessarily involves an "all-or-nothing" result. In the case of air pollution, either the stationary sources develop the technology necessary to limit emissions to achieve health-based standards, or some sources must be shut down. This shutdown alternative was specifically endorsed in the Senate Committee Report on the 1970 Amendments.⁸

There are three basic elements vital to the effectiveness of the technology-forcing strategy for air pollution. The 1970 Amendments dealt with all three of these elements, some more successfully than others. The first involved setting the standard to be achieved. The 1970 Amendments mandated immediate development of National Primary Ambient Air Quality Standards (NPAAQS)⁹ for five basic air pollutants. The NPAAQS were each to be set at a level sufficient to protect the public health, allowing for an adequate margin of safety.¹⁰

The second element of the strategy involved implementing or attaining the NPAAQS by a definite date, again without considering feasibility issues. In the air pollution context, this primarily involved

7. See Bonine, *The Evolution of "Technology-Forcing" in the Clean Air Act*, [1975] 6 ENVIR. REP. (BNA) 12-15; La Pierre, *supra* note 6, at 771-73.

8. The committee determined that . . . the health of people is more important than the question of whether the early achievement of ambient air quality standards is technically feasible. . . . Therefore, the Committee determined that existing sources of pollutants either should meet the standard of the law or be closed down,
S. REP. NO. 1196, 91st Cong., 2d Sess. 2-3 (1970) [hereinafter cited as S. REP. NO. 1196].

9. Clean Air Act of 1970, § 109, 42 U.S.C. § 1857c-4 (1970) (currently codified at 42 U.S.C.A. § 7409 (West Supp. 1977)).

10. *Id.*

an attempt to ascertain the total amount of pollutants that would cause the ambient air levels to reach the maximum level allowed.¹¹ Next, the amount of emissions from both stationary and mobile sources had to be ascertained. Finally, controllable emissions were limited so that the total tonnage of emissions from all sources would fall below the allotted amount.¹² For this allotment system to operate successfully, deviations from the standards must be strictly limited so that the attainment date or individual source controls are not easily evaded. The system created by the 1970 Amendments was based on a goal of attaining NPAAQS by May 31, 1975, or as expeditiously as practicable.¹³ Additionally, the 1970 Amendments attempted to limit extensions, variances, and revisions by imposing cumbersome and difficult procedural and substantive requirements as conditions precedent to granting extensions.¹⁴

The third critical aspect of the technology-forcing strategy is a provision for quick and certain enforcement authority. The probability of enforcement tends to ensure that polluters at least attempt to develop and utilize requisite technology, rather than delaying compliance through litigation, by making it less profitable to pay attorney's fees than to pay the research and engineering costs of compliance.¹⁵ The 1970 Amendments sought to improve the previous system of state enforcement, or lack thereof,¹⁶ by granting a federal right of enforcement.¹⁷ Additionally, the 1970 Amendments sought to limit judicial review of the emission standards contained in the state im-

11. This basic process has been accurately described as a problem of "atmospheric loadings." Bleicher, *Economic and Technical Feasibility in Clean Air Enforcement Against Stationary Sources*, 89 HARV. L. REV. 316, 325-26 (1975).

12. *Id.* Unfortunately the state of the technological art and the research base in 1970 and at present is such that, for most of the above, the calculations are imprecise, depend upon local atmospheric and terrestrial conditions, and are otherwise not easily quantifiable. Furthermore, the transport of air pollutants from one region to another is an area just now being explored in depth.

13. Clean Air Act of 1970, § 110, 42 U.S.C. § 1857c-5 (1970) (currently codified at 42 U.S.C.A. § 7410 (West Supp. 1977)).

14. See text accompanying notes 59-78 *infra*.

15. See La Pierre, *supra* note 6, at 771-73. This assumes, of course, that the technology can be developed within the specified time limits. Certainly the legislators in 1970 did not know whether or not the requisite technologies for stationary sources would or could be developed. Three of the pollutant standards are heavily dependent on controls over motor vehicle emissions.

16. See Kramer I, *supra* note 3, at 56-58, 69-71 & 77-78.

17. Clean Air Act of 1970, § 113, 42 U.S.C. § 1857c-8 (1970) (currently codified at 42 U.S.C.A. § 7413 (West Supp. 1977)).

plementation plans (SIP) to an appellate proceeding brought within thirty days of the acceptance of the SIP by the Administrator.¹⁸ The 1970 Amendments thus seemed to preclude raising feasibility issues as a defense in a later enforcement or criminal proceeding. Such proceedings were limited to the single question of whether the standard was violated, and could not consider whether the standard was actually achievable.¹⁹

Between the enactment of the 1970 Amendments and the decision in *Union Electric*,²⁰ the courts, Congress, and the EPA tried to come to grips with the "all-or-nothing" result inherent in the technology-forcing strategy. Some courts refused to accept it,²¹ others attempted to modify it,²² while others simply rewrote the 1970 Amendments.²³

18. Clean Air Act of 1970, § 307, 42 U.S.C. § 1857h-5 (1970) (currently codified at 42 U.S.C.A. § 7607 (West Supp. 1977)).

19. Clean Air Act of 1970, § 307(b), 42 U.S.C. § 1857h-5(b) (1970) provided in part:

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard under section 112, any standard of performance under section 111, any standard under section 202 (other than a standard required to be prescribed under section 202(b)(1)), any determination under section 202(b)(5), any control or prohibition under section 211, or any standard under section 231 may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 110 or section 111(d) may be filed only in the United States Court of Appeals for the appropriate circuit. Any such petition shall be filed within 30 days from the date of such promulgation or approval, or after such date if such petition is based solely on grounds existing after such 30th day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement.

This section was altered by the 1977 Amendments, but its basic purpose remained intact. Clean Air Act Amendments of 1977, §§ 303(d), 305(a), (c), (f)-(h), 42 U.S.C.A. § 7607(b)(1) (West Supp. 1977). See generally *Luneburg & Roselle, Judicial Review Under the Clean Air Act Amendments of 1970*, 15 B.C. INDUS. & COM. L. REV. 667 (1974). See also Note, *A Limited Audience for Protestations of Impossibility: Proposed Procedures for Raising Infeasibility Claims Under the Federal Clean Air Amendments of 1970*, 61 IOWA L. REV. 723 (1976).

20. *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976).

21. *Duquesne Light II*, 522 F.2d 1186 (3rd Cir. 1975), *vacated and remanded*, 427 U.S. 902 (1976); *St. Joe Minerals v. EPA*, 508 F.2d 743 (3rd Cir. 1975), *vacated as moot*, 425 U.S. 987 (1976); *Duquesne Light I*, 481 F.2d 1 (3rd Cir. 1973), *vacated and remanded*, 427 U.S. 902 (1976).

22. *Natural Resources Defense Council, Inc. v. EPA*, 483 F.2d 690 (8th Cir. 1973); *Natural Resources Defense Council, Inc. v. EPA*, 478 F.2d 875 (1st Cir. 1973).

23. *Buckeye Power I*, 481 F.2d 162 (6th Cir. 1973). For a discussion of these varied court responses to the 1970 Amendments, see Bleicher, *supra* note 11, at 329-47.

It is precisely this dilemma that Justice Powell alluded to in his concurring opinion in *Union Electric*.²⁴ Some courts which accepted the congressional mandate suggested, sometimes vigorously, that the polluters go to the legislative branch for relief.²⁵

It was readily apparent to Congress in 1975 that the "all-or-nothing" strategy had not led to sufficient technological breakthroughs for stationary sources of air pollution to attain the NPAAQS.²⁶ As of August 31, 1975, it was estimated that some 132 of approximately 247 Air Quality Control Regions (AQCR's) nationwide were not expected to attain the NPAAQS for particulate matter.²⁷ Another thirty-five AQCR's were not expected to attain the NPAAQS for sulfur dioxide.²⁸ Because this would necessitate shutdowns of some stationary sources of particulate matter and sulfur dioxide in non-attainment areas, as well as prohibiting future new sources of air pollution, the possibility that Justice Powell envisioned threatened to become a reality.

In the following two years Congress debated how to deal with the reality of non-attainment. Congress was faced with three alternatives: continue the 1970 Amendments' approach and follow the technology-forcing strategy to its logical conclusion: namely, the shutting down of many stationary sources of air pollution; abandon totally the technology-forcing strategy of the 1970 Amendments and utilize a new system whereby feasibility and social issues are relevant throughout the decisionmaking process; or compromise the 1975 deadline but retain technology-forcing as a strategy. Position two would make the protection of the public health only one of several factors to be weighed in any particular decision to regulate the emissions of individual sources. Position three would acknowledge that three years was an insufficient period to achieve control over 22,000

24. See note 1 and accompanying text *supra*.

25. See, e.g., *Santa Rosa v. EPA*, 534 F.2d 150 (9th Cir. 1976), where the court refused to grant petitioner relief from a proposed regulation imposing 100% gas rationing in the Los Angeles metropolitan area in order to meet the NPAAQS. Citing the First Circuit in *South Terminal Corp. v. EPA*, 504 F.2d 646 (1st Cir. 1974), the Ninth Circuit concluded: "Neither EPA nor this court has any right to decide that it is better to maintain pollutants at a level hazardous to health than to require the degree of public sacrifice needed to reduce them to tolerable limits." *Id.* at 154.

26. See, e.g., *Clean Air Act Oversight Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93rd Cong., 2d Sess. (1974).

27. EPA, STATE AIR POLLUTION IMPLEMENTATION PLAN 1-2 (1975).

28. *Id.* The problem with attainment of the NPAAQS for the other three pollutants is compounded by their multiple sources, both stationary and mobile.

major stationary sources or to develop control technology adequate to achieve emission limitations necessary for NPAAQS attainment.

Concurrent with this congressional review was the United States Supreme Court's decision in *Union Electric*, which confirmed the technology-forcing mandate of the 1970 Amendments and the resulting necessity of stationary source shutdowns in many areas of the country. Congress responded by enacting the Clean Air Act Amendments of 1977²⁹ which, while endorsing the technology-forcing strategy, greatly weakened two of its primary means of implementation by removing the non-flexible attainment date and expanding the availability of extensions, revisions, and variances.

This Article considers post-*Union Electric* litigation involving stationary sources and the original technology-forcing strategy, and analyzes the impact of the 1977 Amendments on the continued viability of the technology-forcing strategy for stationary sources. To some extent any delay, extension, or variance emasculates the technology-forcing strategy. However, faced with the reality of non-attainment and the possible closure of important industrial operations, and apparently heeding Justice Powell's advice in *Union Electric*,³⁰ Congress decided that delay was better than shutdowns.

I. NATIONAL PRIMARY AMBIENT AIR QUALITY STANDARDS

The 1970 Amendments left little doubt that the NPAAQS were to be health-based standards,³¹ and this congressional mandate to exclude economic and technological factors was put into effect by the Administrator.³² The use of health-based NPAAQS has also engendered the least amount of litigation or lobbying of the three segments of the technology-forcing triumvirate.

No NPAAQS has been successfully attacked on feasibility or social grounds. A national secondary ambient air quality standard (NSAAQS) was successfully challenged in *Kennecott Copper Corp. v. EPA*,³³ but solely on the basis that the scientific data used to support the standard was insufficient to show the alleged deleterious effect on

29. 42 U.S.C.A. §§ 7401-7642 (West Supp. 1977).

30. See note 1 and accompanying text *supra*.

31. Clean Air Act of 1970, § 109, 42 U.S.C. § 1857c-4 (1970) (currently codified at 42 U.S.C.A. § 7409 (West Supp. 1977)). For a more complete legislative history of NPAAQS, see Kramer II, *supra* note 6, at 172-75.

32. EPA Promulgation of Primary and Secondary Standards, 36 Fed. Reg. 8186 (1971).

33. 462 F.2d 846 (D.C. Cir. 1972).

the general welfare from exposure to the selected level for sulfur dioxide.³⁴ The only case that has arisen since *Union Electric* dealing with the setting of NPAAQS was brought by an environmental group and not a polluter.³⁵ Again, the concept of exclusively health-based standards was not challenged. Rather, at issue was the Administrator's duty to create an NPAAQS for lead once he had determined that lead was a harmful pollutant emitted from various mobile or stationary sources.³⁶ The Administrator had taken the position that, even though lead was a health-endangering pollutant for which a criteria document had been issued, he was not required to promulgate an NPAAQS because lead emissions could be regulated under other sections of the 1970 Amendments.³⁷ The Second Circuit considered the integration of the mandatory attainment date and the setting of NPAAQS as being "central to the Amendments' regulatory scheme," citing *Union Electric*.³⁸ Thus, once the Administrator makes the necessary determination under section 108 that pollutants emitting from numerous or diverse mobile or stationary sources could reasonably be anticipated to endanger public health or welfare,³⁹ he has no discretion under the statute to regulate such pollutants through any process other than the setting of an NPAAQS.⁴⁰ The result has been a proposed NPAAQS for lead of 1.5 micrograms per cubic meter, based on a monthly average.⁴¹ The setting of a new NPAAQS trig-

34. *Id.* at 848.

35. *Natural Resources Defense Council, Inc. v. Train*, 545 F.2d 320 (2d Cir. 1976), *aff'g* 411 F. Supp. 864 (S.D.N.Y. 1975).

36. *Id.* at 324-25. *See also* Clean Air Act of 1970, § 108, 42 U.S.C. § 1857c-3 (1970) (currently codified at 42 U.S.C.A. § 7408 (West Supp. 1977)).

37. *Natural Resources Defense Council, Inc. v. Train*, 545 F.2d 320, 327 (2d Cir. 1976). These other strategies include regulation under standards of performance for new or modified stationary sources. *See* Clean Air Act of 1970, § 111, 42 U.S.C. § 1857c-6 (1970) (currently codified at 42 U.S.C.A. § 7411 (West Supp. 1977)), in which economic factors were specifically included as part of the decisionmaking process. The other sections dealt with the lead in the atmosphere that results from motor vehicle emissions.

38. *Natural Resources Defense Council, Inc. v. Train*, 545 F.2d 320, 327 (2d Cir. 1976), *quoting from* *Union Elec. Co. v. EPA*, 427 U.S. 246, 258 (1976).

39. Clean Air Act of 1970, § 108, 42 U.S.C. § 1857c-3 (1970) (currently codified at 42 U.S.C.A. § 7408 (West Supp. 1977)).

40. *Natural Resources Defense Council, Inc. v. Train*, 545 F.2d 320, 328 (2d Cir. 1976).

41. Proposed National Ambient Air Quality Standard, 42 Fed. Reg. 63,076 (1977); [1977] 8 ENVIR. REP. (BNA) 1235. Current EPA Administrator Costle has stated that no further listings of pollutants under §§ 108 & 109 are anticipated by the EPA in the immediate future. [1977] 8 ENVIR. REP. (BNA) 1334.

gers the SIP process whereby states, within nine months of the final promulgation of the NPAAQS, must submit to the Administrator a program for the attainment, within three years, of the NPAAQS.⁴² This technology-forcing strategy for lead emissions from stationary sources may run into the same problems faced by Congress in 1975 with the non-attainment of the NPAAQS for other standards. Thus, unless more stringent regulation of mobile source emissions is developed,⁴³ the NPAAQS for lead may be unachievable without the shut-down of certain stationary sources.

Meanwhile, in Congress there was a growing attempt to change the health-based NPAAQS to economic, technological, energy, and health-based standards. In both the 1974⁴⁴ and 1975⁴⁵ Senate Oversight Hearings on the Clean Air Act several industry representatives urged such a change.⁴⁶ However, neither the proposed 1976 Amend-

42. Clean Air Act of 1970, § 110(a), 42 U.S.C. § 1857c-5(a) (1970) (currently codified at 42 U.S.C.A. § 7410(a)(1)-(a)(2)(B) (West Supp. 1977)). States can apply for a two-year extension of the attainment date. Clean Air Act of 1970, § 110(e), 42 U.S.C. § 1857c-5(e) (1970) (currently codified at 42 U.S.C.A. § 7410(e) (West Supp. 1977)).

43. The problem of controlling lead emissions points out the difficulties states face in transferring federally-set national ambient air quality standards into emission standards for an SIP. Since lead emissions originate from both stationary and mobile sources, the states must accept as a given amount the tonnage of lead emissions from mobile sources, which are regulated solely by the EPA. Therefore, any decision made as to stationary source load allocation is severely restricted. Conceivably, EPA decisions on lead emissions from automobiles and lead content of gasoline and paint could fully occupy the atmospheric loadings allowed to attain the NPAAQS. Thus the only SIP a state could submit that would receive approval is one which allowed no lead emissions from stationary sources. The result would be the ultimate in technology-forcing strategy: technology would either be developed within three years to reach zero lead emissions or the industry would be shut down.

44. *Clean Air Act Oversight Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93rd Cong., 2d Sess. (1974) [hereinafter cited as *1974 Oversight Hearings*].

45. *Hearings on the Implementation of the Clean Air Act—1975 Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 94th Cong., 1st Sess. (1975) [hereinafter cited as *1975 Oversight Hearings*].

46. See, e.g., *1974 Oversight Hearings*, *supra* note 44, at 230-31 (Statement of American Iron and Steel Institute); *id.* at 193 (Statement of Earl Mallick, United States Steel Co.); *id.* at 216-18 (Statement of American Iron and Steel Institute); *id.* at 629-30 (Statement of W.J. Copoc, Texaco, Inc.); *id.* at 699-702 (Statement of Edward Starke, Shell Oil Co.); *id.* at 759-60 (Statement of P.N. Gammelgard, Am. Petroleum Institute); *id.* at 769 (Supplementary statement of Texaco, Inc.); pt. 2, at 1388-89 (Supplementary statement of E.I. DuPont de Nemours and Co.). See *1975 Oversight Hearings*, *supra* note 45, at 320, 325-27, 394-417 (Statements and exhibits of Frank Zarb, Federal Energy Admin.); *id.* at 1794-95 (Statement of Am. Mining Cong.).

ments⁴⁷ nor the 1977 Amendments⁴⁸ adopted this position.⁴⁹

While maintaining the integrity of the health-based feature of the NPAAQS, the 1977 Amendments created an ongoing review procedure for setting an NPAAQS.⁵⁰ An independent review team, appointed by the Administrator, is to comment at five-year intervals on the NPAAQS and its underlying criteria documents. The team is given the express duty of “advis[ing] 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.”⁵¹ However, the legislative history of this new section leaves unaffected the earlier mandate to exclude those factors from the Administrator’s decision to set any particular NPAAQS.⁵² This advisory power, according to the House Report, was not intended to be “used as a basis for the Administrator to disapprove any State’s plan.”⁵³ This seems to preclude the Administrator from utilizing the information contained in the report in setting the NPAAQS, but allows the Administrator to utilize the information in reviewing proposed SIP’s.

Because certain air pollutants may not have a threshold level beneath which there are no adverse health effects, the 1970 Amend-

47. S. 252, 94th Cong., 2d Sess. *as reported in* S. REP. NO. 717, 94th Cong., 2d Sess. (1976) [hereinafter cited as S. REP. NO. 717]; H.R. 10498, 94th Cong., 2d Sess. *as reported in* H.R. REP. NO. 1175, 94th Cong., 2d Sess. (1976) [hereinafter cited as H.R. REP. NO. 1175].

48. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, §§ 101-315, 91 Stat. 685 (1977).

49. Compare S. REP. NO. 717, *supra* note 47, at 14-15 with H.R. REP. NO. 1175, *supra* note 47, at 152-56 and with Clean Air Act Amendments of 1977, §§ 106, 120, 42 U.S.C.A. §§ 7410, 7422 (West Supp. 1977).

50. Clean Air Act Amendments of 1977, § 106, 42 U.S.C.A. § 7409 (West Supp. 1977). The ambient air quality standards had already been extensively reviewed and reaffirmed prior to the 1977 Amendments. See, e.g., [1976] 7 ENVIR. REP. (BNA) 12, 127, 464, 486, 696 & 924; [1975] 6 ENVIR. REP. (BNA) 933.

51. Clean Air Act Amendments of 1977, § 106, 42 U.S.C.A. § 7409 (West Supp. 1977).

52. H.R. REP. NO. 294, 95th Cong., 1st Sess. 180-83 (1977) [hereinafter cited as H.R. REP. NO. 294]. The Senate bill did not contain any changes in § 109 of the 1970 Amendments. S. 252, 95th Cong., 1st Sess. (1977). The Conference Committee Report merely stated that the Senate conferees had acceded to the House version with certain changes not relevant to the discussion here. H.R. REP. NO. 564, 95th Cong., 1st Sess. 124 (1977) [hereinafter cited as H.R. REP. NO. 564]. This may be a moot point since the present Administrator has stated that lead is expected to be the last NPAAQS pollutant named. [1977] 8 ENVIR. REP. (BNA) 1334.

53. H.R. REP. NO. 564, *supra* note 52, at 182-83.

ments gave the Administrator power to directly regulate the emissions of hazardous pollutants,⁵⁴ in addition to regulatory power through the NPAAQS strategy. This alternative process utilized a technology-forcing strategy by requiring the Administrator to set emissions standards for new, modified, or existing stationary sources at levels sufficient to protect the public health and welfare, with adequate margins for safety.⁵⁵ As with the setting of NPAAQS, "public health" is the sole basis for the standard. In the case of hazardous pollutants, however, polluters can raise economic and technological feasibility issues when applying for a waiver from the emission standard.⁵⁶ To date there has been no litigation attacking any hazardous emission limitation even though feasibility issues are not excluded from the decisionmaking process.⁵⁷

The 1977 Amendments do not change this technology-forcing aspect of the hazardous emission control strategy. Instead, they reinforce the congressional desire to control hazardous air pollutants through health considerations alone by requiring the Administrator, within one year of enactment, to study and report on the need to regulate cadmium, arsenic and polycyclic organic matter either under the NPAAQS or a hazardous emission program.⁵⁸ The Administrator is also given two years to study and report on the health ramifications of radioactive pollutants in the ambient air.⁵⁹ The legislative history reflects Congress' continuing concern with the necessity of regulating health-endangering air pollutants, whether by the NPAAQS/SIP system or through the hazardous air pollution emission program.⁶⁰

Thus, it is clear that Congress in 1977 reaffirmed its mandate that public health be the sole factor considered in ascertaining the neces-

54. *Id.* at 182.

55. Clean Air Act of 1970, § 112, 42 U.S.C. § 1857c-8 (1970) (currently codified at 42 U.S.C.A. § 7412 (West Supp. 1977)).

56. *Id.* This is the same standard used to set the NPAAQS. Clean Air Act of 1970, § 109, 42 U.S.C. § 1857c-4 (1970) (currently codified at 42 U.S.C.A. § 7409 (West Supp. 1977)).

57. Clean Air Act of 1970, § 112(c)(1)(B), 42 U.S.C. § 1857c-7(c)(1)(B) (1970) (currently codified at 42 U.S.C.A. § 7412(c)(1)(B) (West Supp. 1977)). See also S. REP. NO. 1196, *supra* note 8, at 20, 94-95.

58. Hazardous emission standards have been set for beryllium, mercury, asbestos, and vinyl chloride. See 40 C.F.R. § 61.01-71 (1977).

59. Clean Air Act Amendments of 1977, § 120(a), 42 U.S.C.A. § 7422 (West Supp. 1977).

60. H.R. REP. NO. 294, *supra* note 52, at 3, 36-42; H.R. REP. NO. 564, *supra* note 52, at 141-43.

sity of regulating air pollutants. This aspect of the technology-forcing strategy remains largely intact from the strategy created in 1970. If anything, the courts and Congress have attempted to prod the Administrator to do more in this area to achieve the overall purpose of protecting the public health regardless of the feasibility of control or any economic ramifications of the decision.

II. IMPLEMENTATION OF NPAAQS (VARIANCES, EXTENSIONS AND REVISIONS)

A. 1970 Amendments

The second segment of the technology-forcing strategy involves a fixed attainment date that cannot be easily avoided through devices such as variances, revisions or extensions. The 1970 Amendments made it clear that NPAAQS would have to be achieved by May 31, 1975, or as expeditiously as practicable.⁶¹ The 1970 Amendments also

61. Clean Air Act of 1970, § 110(a), 42 U.S.C. § 1857c-5(a) (1970) (currently codified at 42 U.S.C.A. § 7410(a) (West Supp. 1977)).

Even though the 1970 Amendments mandated NPAAQS attainment within three years of the Administrator's approval of the state implementation plan, the Sixth Circuit effectively eliminated that major element of the technology-forcing strategy in a series of decisions. The court first struck down the Administrator's initial approval of the Ohio and Kentucky SIP's because of a failure to comply with the notice and hearing requirements of the Administrative Procedure Act. *Buckeye Power I*, 481 F.2d 162 (6th Cir. 1973). For a general criticism, see *Kramer II*, *supra* note 6, at 187-88. The Administrator chose to comply with the decision rather than appealing it to the Supreme Court and, on April 15, 1974, reapproved certain sections of the SIP that included an attainment date for total suspended particulates of July 1, 1975. 39 Fed. Reg. 13,539 (1974). The approval was soon challenged but was dismissed as not ripe for review. *Buckeye Power II*, 525 F.2d 80, 81-82 (6th Cir. 1975). The Ohio EPA later determined that the attainment date was "impossible" and revised it to April 15, 1977. See *Northern Ohio Lung Assoc. v. EPA*, No. 76-2369 (6th Cir., filed Feb. 2, 1978). Upon submission the Administrator approved the revised attainment date. 41 Fed. Reg. 41,691 (1976). It was this approval that triggered a third round of litigation, although this time the utilities were joined by an environmental group seeking review of the new attainment date. *Northern Ohio Lung Assoc. v. EPA*, No. 76-2369 (6th Cir., filed Feb. 2, 1978). The Sixth Circuit followed the *Union Electric* mandate by refusing to consider the utilities' argument that the attainment date was both technologically and economically infeasible. The utilities had suggested that no attainment date be set for particulates until a "reasonable" and realistic date could be established. The court rejected this argument since feasibility issues were not part of the Administrator's review under § 110. The environmental groups, on the other hand, argued that mid-1975 was the latest attainment date that could be recognized under § 109 and § 110 of the 1970 Amendments. The court, utilizing a limited scope of review as to the Administrator's decision, concluded that it was not an abuse of discretion to delay the attainment date to three years after promulgation of the SIP. The initial approval of the amendment, having been overturned in *Buckeye I*, could

limited the availability of extensions and variances by establishing two rather complex procedural mechanisms. Under section 110(e) the Governor of any state at the time of the original submission of the SIP to the Administrator could request a two-year extension of the attainment date for any NPAAQS.⁶² The Administrator could grant

not serve as the starting date. The court contrasted the "three years" language of § 110 with the specific calendar dates set for automobile emissions, concluding that Congress did not intend to set mid-1975 as the final attainment date. Aiding that finding was the court's continued reluctance to recognize the need for a hard and fast achievement deadline to further the technology-forcing strategy. The court concluded that the 1970 Amendments did not create a sudden death deadline for attainment. *Id.* This conclusion fails to acknowledge the repeated congressional mandate to utilize a technology-forcing strategy—a mandate that has been recognized by the Supreme Court. See *Union Electric Co. v. EPA*, 427 U.S. 246 (1976); *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975). Since an inflexible attainment date is a key ingredient to the technology-forcing strategy, allowing states to push back an attainment date merely by proposing inadequate plans is inconsistent with the public health-protecting strategy developed by Congress. (The Ohio SIP on resubmission did not contain a sulfur dioxide component, forcing the Administrator to hold additional hearings to promulgate a substitute strategy. The delays in developing this strategy pushed back its promulgation date to June 17, 1977, and the attainment date to June 17, 1980. 42 Fed. Reg. 27,588 (1977). In light of the 1977 Amendments the 1980 attainment date raises some interesting questions. Is Ohio a non-attainment area for purposes of the emissions trade-off policy? Must sources seek Delayed Compliance Orders? If they are not in compliance by July 1, 1979, can sources be assessed Non-compliance Penalties?) The court also held that since the SIP had not been legally approved until January 14, 1976, then June 1977 was within the § 110(a) requirement that the SIP be attained within three years of approval by the Administrator. Lacking any abuse of discretion and without violation of any statutory requirement, the 1977 attainment date was upheld. *Northern Ohio Lung Assoc. v. EPA*, No. 76-2369 (6th Cir., filed Feb. 2, 1978).

62. Clean Air Act of 1970, § 110(e), 42 U.S.C. § 1857c-5(e) (1970) (currently codified at 42 U.S.C.A. § 7410(e) (West Supp. 1977)). This section provides:

(e)(1) Upon application of a Governor of a State at the time of submission of any plan implementing a national ambient air quality primary standard, the Administrator may (subject to paragraph (2)) extend the three-year period referred to in subsection (a)(2)(A)(i) for not more than two years for an air quality control region if after review of such plan the Administrator determines that—

(A) one or more emission sources (or classes of moving sources) are unable to comply with the requirements of such plan which implement such primary standard because the necessary technology or other alternatives are not available or will not be available soon enough to permit compliance within such three-year period, and

(B) the State has considered and applied as a part of its plan reasonably available alternative means of attaining such primary standard and has justifiably concluded that attainment of such primary standard within the three years cannot be achieved.

(2) The Administrator may grant an extension under paragraph (1) only if he determines that the State plan provides for—

(A) application of the requirements of the plan which implement such pri-

the extension only after making several difficult determinations.⁶³ A section 110(e) extension would not apply directly to individual sources, but would allow an additional two-year period for the SIP to meet the NPAAQS. Several section 110(e) extensions have been granted, and further use of section 110(e) for newly-promulgated NPAAQS, such as lead, is still possible.

The only explicit individual source variance mechanism created by the 1970 Amendments was contained in section 110(f).⁶⁴ The Admin-

mary standard to all emission sources in such region other than the sources (or classes) described in paragraph (1)(A) within the three-year period, and

(B) such interim measures of control of the sources (or classes) described in paragraph (1)(a) as the Administrator determines to be reasonable under the circumstances.

This mechanism would apply only to newly designated NPAAQS pollutants such as lead.

63. See note 62 *supra*.

64. Clean Air Act of 1970, § 110(f), 42 U.S.C. § 1857c-5(f) (1970). This section provided in part:

(f)(1) Prior to the date on which any stationary source or class of moving sources is required to comply with any requirement of any applicable implementation plan the Governor of the State to which such plan applies may apply to the Administrator to postpone the applicability of such requirement to such source (or class) for not more than one year. If the Administrator determines that—

(A) good faith efforts have been made to comply with such requirements before such date,

(B) such source (or class) is unable to comply with such requirement because the necessary technology or other alternative methods of control are not available or have not been available for a sufficient period of time,

(C) any available alternative operating procedures and interim control measures have reduced or will reduce the impact of such source on public health, and

(D) the continued operation of such source is essential to national security or to the public health or welfare, then the Administrator shall grant a postponement of such requirement.

(2)(A) Any determination under paragraph (1) shall (i) be made on the record after notice to interested persons and opportunity for hearing, (ii) be based upon a fair evaluation of the entire record at such hearings, and (iii) include a statement setting forth in detail the findings and conclusions upon which the determination is based.

(B) Any determination made pursuant to this paragraph shall be subject to judicial review by the United States court of appeals for the circuit which includes such State upon the filing in such court within 30 days from the date of such decision of a petition by any interested person praying that the decision be modified or set aside in whole or in part. A copy of the petition shall forthwith be sent by registered or certified mail to the Administrator and thereupon the Administrator shall certify and file in such court the record upon which the final decision complained of was issued, as provided in section 2112 of title 28, United States Code. Upon the filing of such petition the court shall have jurisdiction to affirm, or set aside the determination complained of in whole or in part. The findings of the Administrator with respect to questions of fact (including each

istrator could grant the section 110(f) extension only on the request of the Governor of the state in which the source was located, and not upon request of the individual polluter. In addition, the Administrator could grant the extension only after holding an adjudicatory-type hearing and making several specific findings.⁶⁵ Feasibility was only one of four findings required before a section 110(f) variance could be granted.⁶⁶ Variances were limited to a one-year period.

Because of a perceived lack of responsiveness of the section 110(f) mechanism to the needs of industrial polluters, it has never been utilized. Instead, states and the EPA began to grant individual variances from approved SIP's without utilizing section 110(f).⁶⁷ The EPA's position was that variances were "revisions" of an SIP under section 110(a), thus requiring EPA approval prior to their becoming effective. However, under section 110(a) the EPA could approve a revision without holding the adjudicatory hearings required under section 110(e) or (f).⁶⁸ In implementing this variance program, neither the EPA nor the states made any crucial distinction between variances that threatened attainment of the health-based NPAAQS within three years and those which did not.

The circuit courts, in a series of decisions, reached several different positions on this variance issue. The First Circuit utilized the attainment date as a dividing point between variances that could be granted only under section 110(f) and those that could be treated as

determination made under subparagraphs (A), (B), and (D) of paragraph (1)) shall be sustained if based upon a fair evaluation of the entire record at such hearing.

(C) Proceedings before the court under this paragraph shall take precedence over all the other causes of action on the docket and shall be assigned for hearing and decision at the earliest practicable date and expedited in every way.

(D) Section 307(a) (relating to subpoenas) shall be applicable to any proceeding under this subsection.

Section 110(f) has been repealed by the 1977 Amendments. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 107(a), 91 Stat. 691 (1977). See generally Kramer I, *supra* note 3, at 73-76.

65. Clean Air Act of 1970, § 110(f), 42 U.S.C. § 1857c-5(f) (1970). The necessity of an adjudicatory hearing is evoked because Congress utilized the magic words of rulemaking "on the record." The use of those words brings the proceedings under the adjudicatory hearing requirements of the Administrative Procedure Act, 5 U.S.C. § 553 (1970). It also entails a more stringent scope of judicial review utilizing the substantial evidence test. See *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 414-15 (1971).

66. See note 64 *supra*.

67. See Kramer I, *supra* note 3, at 82-95.

68. *Id.*

revisions under section 110(a).⁶⁹ The Fifth Circuit required that all variances granted by the states utilize the section 110(f) process.⁷⁰ Only the Ninth Circuit correctly saw the distinction between those variances that threatened attainment and those that did not.⁷¹

The issue reached the Supreme Court in *Train v. NRDC*,⁷² on appeal from the Fifth Circuit. The circuit court had based its disapproval of the EPA's evasion of section 110(f) on the technology-forcing strategy of the 1970 Amendments.⁷³ The Supreme Court reversed the Fifth Circuit decision, but at the same time clearly affirmed the congressional mandate of a technology-forcing strategy for stationary sources. The Court immediately recognized the mandatory three-year attainment period as "the heart of the 1970 Amendments."⁷⁴ In addition, the Court recognized the limited "safety-valve" nature of both the section 110(e) extension and the section 110(f) variance.⁷⁵ The reason for the reversal was a limiting interpretation the Court gave to the revision authority under section 110(a). As the Court construed the statute, variances granted under the revision authority would not be valid unless the SIP, after revision, would still meet the section 110 mandate of NPAAQS attainment by May 31, 1975. Thus, variances could be granted by the state with EPA approval under section 110(a) only if they did not individually or collectively preclude attainment of the NPAAQS. For all attainment-endangering changes, section 110(f) would provide the only recourse. For variances not threatening attainment the technology-forcing mandate was not applicable, since the 1970 Amendments were not intended to force technological development beyond that necessary to achieve NPAAQS.⁷⁶

69. *Natural Resources Defense Council, Inc. v. EPA*, 478 F.2d 875, 885-88 (1st Cir. 1973). *Accord*, *Natural Resources Defense Council, Inc. v. EPA*, 494 F.2d 519, 523 (2d Cir. 1974); *Natural Resources Defense Council, Inc. v. EPA*, 483 F.2d 690, 693-94 (8th Cir. 1973).

70. *Natural Resources Defense Council, Inc. v. EPA*, 489 F.2d 390, 402-03 (5th Cir. 1974), *rev'd sub nom. Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975).

71. *Natural Resources Defense Council, Inc. v. EPA*, 507 F.2d 905, 916 (9th Cir. 1974).

72. 421 U.S. 60 (1975).

73. *Natural Resources Defense Council, Inc. v. EPA*, 489 F.2d 390, 402-03 (5th Cir. 1974).

74. *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 66-67 (1975).

75. *Id.* at 81.

76. *Id.* at 90-92.

Thus, after *Train*, a bifurcated system for granting variances should have been instituted. For non-attainment areas individual sources could not be granted variances without utilizing the section 110(f) mechanism. This was consonant with the technology-forcing strategy. For variances that would not threaten attainment of NPAAQS, the technology-forcing strategy was not applicable and therefore states could, at their discretion, issue such individual variances provided the EPA viewed them as a revision of an already-approved SIP.

In addition to the section 110(e) and 110(f) processes, extensions could be granted through compliance orders issued under enforcement powers granted the EPA and the states.⁷⁷ Section 113 allowed the EPA to issue compliance orders specifying a "reasonable" time for compliance as an alternative remedy in cases where sources were in violation of an approved SIP.⁷⁸ Section 113 compliance orders have illegally allowed individual sources to extend their dates of compliance far beyond the mandatory attainment date of 1975 or 1977.⁷⁹ These compliance orders are invalid since, in most cases, they

77. Clean Air Act of 1970, § 113, 42 U.S.C. § 1857c-8 (1970) (currently codified at 42 U.S.C.A. § 7413 (West Supp. 1977)). Section 113 provides in part:

(a)(1) Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any requirement of any applicable implementation plan, the Administrator shall notify the person in violation of the plan and the State in which the plan applies of such finding. If such violation extends beyond the 30th day after the date of the Administrator's notification, the Administrator may issue an order requiring such person to comply with the requirements of such plan or he may bring a civil action in accordance with subsection (b). . . .

(4) An order issued under this subsection (other than an order relating to a violation of section 112) shall not take effect until the person to whom it is issued has had an opportunity to confer with the Administrator concerning the alleged violation. A copy of any order issued under this subsection shall be sent to the State air pollution control agency of any State in which the violation occurs. Any order issued under this subsection shall state with reasonable specificity the nature of the violation, specify a time for compliance which the Administrator determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In any case in which an order under this subsection (or notice to a violator under paragraph (1)) is issued to a corporation, a copy of such order (or notice) shall be issued to appropriate corporate officers.

Section 110 also allowed the states to extend compliance schedules in order to achieve mandated levels of emissions. These are not really extensions because they could not extend beyond the attainment date.

78. Clean Air Act of 1970, § 113, 42 U.S.C. § 1857c-8(b) (1970) (currently codified at 42 U.S.C.A. § 7413(a)(1) (West Supp. (1977))).

79. See, e.g., [1974] 5 ENVIR. REP. (BNA) 1097-98 (allowing Philadelphia Electric

are inconsistent with the legislative mandate requiring SIP's to attain and maintain the NPAAQS within the designated time period.⁸⁰ The use of compliance orders to extend the deadlines is contradictory to the technology-forcing strategy. They have undoubtedly been utilized for large numbers of major sources that would have otherwise sought relief under section 110(f). Finally, section 110 authorized the inclusion in SIP's of schedules of compliance as a means to obtain NPAAQS.⁸¹ These schedules, like section 113 compliance orders, could not legally extend beyond the mandated attainment date.

Thus, while the 1970 Amendments were quite specific in limiting the availability of extensions, variances, and revisions to effectuate the technology-forcing strategy, it was apparent from the outset that the EPA and the states were trying to circumvent those limitations. The "all-or-nothing" approach was not readily acceptable to state and local officials, especially when applied to major sources of pollution that also happened to be major sources of employment and taxes. States sought, on economic and technological grounds, to allow individual sources to pollute even though violations of NPAAQS would result. The shutdown alternative was simply unacceptable to many regions of the country that by mid-1975 had not achieved the NPAAQS for the five named pollutants.⁸²

B. *The 1977 Amendments*

The congressional program created by the 1970 Amendments was a relatively simple, if not palatable, process for polluters. The alternatives allowed were few in number and in most cases the prerequisites to the granting of extensions, variances, and revisions were specifically enumerated in the statute.⁸³ Little administrative latitude or dis-

Co. to delay final compliance until 1978). *See also* [1975] 6 ENVIR. REP.(BNA) 1298; [1974] 5 ENVIR. REP. (BNA) 1303.

80. S. REP. NO. 127, *supra* note 5, at 45, flatly declares: "This procedure has no basis in law. The only authority for extended deadlines is section 110(f)."

81. Clean Air Act of 1970, § 110(a)(2)(B), 42 U.S.C. § 1857c-5(a)(2)(B) (1970) (currently codified at 42 U.S.C.A. § 7410(a)(2)(B) (West Supp. 1977)).

82. EPA, STATE AIR POLLUTION IMPLEMENTATION PLAN (1975).

83. *See* notes 61-81 and accompanying text *supra*. The fact that many states, polluters and courts refused to accept the technology-forcing strategy and its exclusion of economic, technological and social issues does not detract from the basic simplicity of the process. For a general description of the workings of the 1977 Amendments, see Skillern, *Environmental Law Issues in the Development of Energy Resources*, 29 BAYLOR L. REV. 739, 755-72 (1977).

The reality of non-attainment also created the problem of economic stagnation for such areas. Since shutdown of existing plants was the only alternative left to the

cretion was allowed: the NPAAQS *had* to be achieved by 1975. The 1977 Amendments replace this simple but unworkable system with a more complex series of programs designed to maintain the overall technology-forcing strategy while acknowledging the realities of non-attainment.

1. Mandatory Attainment Dates

The 1977 Amendments eliminate the prior confusion concerning the distinction between attainment and non-attainment areas. Under the new statute, all AQCR's in the nation must have been classified as either an attainment or non-attainment area within 120 days of August 7, 1977.⁸⁴ For all areas classified as non-attainment for any of the five named pollutants, a new strategy has been devised to avoid the massive shutdowns that would have taken place under the 1970 Amendments.⁸⁵ In effect, the 1977 Amendments push back the

states after failing to attain the NPAAQS, it became obvious that new sources of air pollution would not be allowed to develop in these non-attainment areas. The EPA responded to this dilemma in December 1976 by creating the so-called "emissions trade-off policy." 41 Fed. Reg. 55,524 (1976). Through this Interpretive Ruling the EPA hoped to allow continued new economic development in the non-attainment areas. The ruling placed several stringent conditions on the granting of a permit for any major source of pollutants in an area where the NPAAQS had not been achieved. *Id.* at 55,528. The new source would have to utilize the lowest achievable emission rate (LAER) for its particular source classification. This was defined to be the lowest emission rate achieved in practice, but could never exceed the limits set by New Source Performance Standards. *Id.* at 55,526. Second, the owner or operator of the proposed source must certify that all existing sources owned or controlled within the same AQCR are in compliance with applicable SIP requirements or are otherwise in compliance with an enforcement order issued under § 113. Third, emission reductions or offsets from existing sources in the area are required such that the total emissions from the existing and proposed sources do not exceed total emissions prior to the request to construct. These offsets must be of the same pollutant, thus, for example, a trade-off of carbon monoxide for sulfur dioxide emissions is not allowed. *Id.* at 55,528-9. These emission offsets must provide a net ambient air quality benefit, not merely a maintenance of the status quo in ambient air quality. In areas where the NPAAQS is not achievable under the approved SIP and a major revision is required in order to attain the NPAAQS, no new construction permits can be granted until the EPA has approved the SIP revision. Certain exemptions are made from the requirements where the lack of adequate fuel supplies is the cause of increased emissions. *Id.* at 55,529. The 1977 Amendments endorse, with certain changes, the EPA's emission offset policy as controlling development in non-attainment areas until July 1, 1979. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 129(a), 91 Stat. 745 (1977). After July 1, 1979, the 1977 Amendments will take over the problem of non-attainment areas. See notes 93-98 and accompanying text *infra*.

84. Clean Air Act Amendments of 1977, § 103, 42 U.S.C.A. § 7407(d) (West Supp. 1977).

85. Attainment areas fall under a program to prevent significant deterioration.

mandatory attainment date for non-attainment areas to December 31, 1982, or as expeditiously as practicable.⁸⁶ States must prepare and submit to the EPA by July 1, 1979, a revised SIP ensuring attainment by December 31, 1982. A penalty is imposed for failure to submit an effective SIP. No state will be allowed to license any new or modified major stationary sources of pollution in a non-attainment area after July 1, 1979, without an approved SIP.⁸⁷ In cases where the AQCR has not attained the NPAAQS for carbon monoxide or photochemical oxidants, a further delay to December 31, 1987, can be granted by the Administrator.⁸⁸

This extension obviously compromises the original technology-forcing strategy. But the legislative history of the 1977 Amendments reaffirms Congress' commitment to protect the public health despite the large economic costs involved,⁸⁹ and several new provisions actu-

Clean Air Act Amendments of 1977, § 127(a), 42 U.S.C.A. §§ 7470-79 (West Supp. 1977). This neat division into attainment and non-attainment areas does not simplify the problem of pre-construction stationary source review, since there is the complicating factor involving transportation of air pollutants in the ambient air. Thus, a source attempting to locate in an attainment area may threaten attainment of an NPAAQS in a non-attainment area. The EPA draft regulations attempting to implement Prevention of Significant Deterioration (PSD) and non-attainment area programs has recognized this problem. [1977] 8 ENVIR. REP. (BNA) 932. It is the current EPA policy to review all new major stationary sources for their impact on both attainment and non-attainment areas regardless of location. [1977] 8 ENVIR. REP. (BNA) 1109-11. The EPA, however, plans to exempt from PSD review all new stationary sources in non-attainment areas because the Lowest Achievable Emission Rate (LAER) requirements for non-attainment areas are more stringent than the PSD requirement of best available control technology. 42 Fed. Reg. 26,226 (1977) (to be codified in 40 C.F.R. § 432).

86. Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. § 7502(a)(1) (West Supp. 1978).

87. *Id.*

88. Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. § 7502(a)(2) (West Supp. 1977). The rationale for the further extension available for photochemical oxidants and carbon monoxide, since they are basically automobile-caused pollutants, is that the easing of motor vehicle standards would make attainment by 1982 impossible. Clean Air Act Amendments of 1977, § 201(a), 42 U.S.C.A. § 7521 (West Supp. 1977).

89. S. REP. NO. 127, *supra* note 5, at 17-18. *See also* H.R. REP. NO. 294, *supra* note 52, which declared:

The provision of law (non-attainment) coupled with the fact that a substantial number of regions had not attained one or more of the standards on time posed a dilemma for the committee. On the one hand, *protection of the public health remains the predominant goal of the Clean Air Act and the Committee.*

. . . On the other hand, a complete prohibition on new growth and expansion in non-attainment areas would pose very serious problems.

Id. at 208-10 (emphasis added).

ally reinforce the strategy. Setting a definite deadline emphasizes to the courts and to polluters the necessity of developing a technology that will allow achievement of the NPAAQS by the attainment date.⁹⁰ It will not take another six-year round of litigation to decide that SIP's must be designed to meet the target date regardless of economic, social or technological factors.⁹¹ It is also a warning to polluters that further litigation will not lead to additional court-imposed delays. Again, shutdown of polluting facilities would be mandated in 1982 if attainment is not achieved. The addition of a penalty for failure to submit a revised SIP will undoubtedly overcome the reluctance of the states to make the difficult decisions necessary to attain NPAAQS.

By moving the attainment deadline back to 1982 and the SIP deadline back to 1979, the 1977 Amendments created an interim period between 1977 and 1979 that had to be dealt with. The EPA already had promulgated its own "emissions offset" policy for non-attainment areas.⁹² The Conference Committee adhered very closely to the EPA's Interpretive Ruling for the interim period,⁹³ but made one important change dealing with the baseline level of pollutants from which the offsets were measured. Under the Interpretive Ruling, the baseline normally would be the level called for in the approved SIP.

90. Compare S. 252, 95th Cong., 1st Sess. § 4 (1977) with Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. § 7502(a) (West Supp. 1977). See also H.R. REP. NO. 564, *supra* note 52, at 155-58. The proposed legislation in 1976 would not have been as satisfactory as the 1977 Amendments because of their limited perspective. Development in non-attainment areas was allowed only where the developer could show no net increase in emissions from the proposed facility location. This would restrict the area in which offsets could be achieved. See S. REP. NO. 717, *supra* note 47, at 41-44; H.R. REP. NO. 1175, *supra* note 47, at 177-81. The 1976 Amendments would have required that the proposed new or modified facility utilize best available control technology (BACT), which considers energy, environmental and economic impacts and other costs in determining what technology is achievable for such a facility. S. 3219, 94th Cong., 2d Sess. § 123 (1976) as reported in H.R. REP. NO. 1742, 94th Cong., 2d Sess. 46 (1976) [hereinafter cited as H.R. REP. NO. 1742]. The outermost limit would have been the new source performance standard under § 111. *Id.* The definition of LAER contained in the 1977 Amendments is more restrictive than BACT, and places the burden of proof on the polluter to show that the emission limitation is not achievable. Compare S. 3219, 94th Cong., 2d Sess. § 11 (1976) and H.R. 10498, 94th Cong., 2d Sess. § 115 (1976) with Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. § 7501 (West Supp. 1977).

91. Union Elec. Co. v. EPA, 427 U.S. 246 (1976). See generally Kramer II, note 6 *supra*.

92. See note 83 *supra*.

93. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 129(a), 91 Stat. 745 (1977).

However, because a number of SIP's were substantially inadequate to meet the mandatory attainment dates, the EPA ruled that for those areas the baseline would be emission limitations representing the reasonably available control measures that would be contained within the required revisions of the SIP's.⁹⁴ The 1977 Amendments weakened this baseline limitation by defining it to be "the applicable implementation plan of the state in effect at the time of application for a permit by a proposed major stationary source. . . ."⁹⁵ If the applicable SIP does not attain NPAAQS, it follows that the total amount of pollutants allowed will be greater than under the required revision. Thus, offsets from this larger total will be easier to achieve than if the baseline were set at the revised SIP total. This creates an incentive for the states to delay submitting SIP's until the last minute so as to allow offsets up to 1979.⁹⁶ Yet, it was just such lacklustre state concern with air pollution control that Congress hoped to remedy through the 1977 Amendments.

The 1977 Amendments also set out the requirements for a waiver from this interim offset policy.⁹⁷ The Administrator can grant a waiver with respect to any pollutant if he determines that the state has an inventory of emissions for each non-attainment area that identifies the type, quantity and source of such pollutant. He must also determine that the state has an enforceable permit program that requires new or modified major stationary sources to meet emission limitations at least as stringent as those required for the 1979-1982 SIP. The permit program must require existing sources to achieve such emission reductions as may be obtained through the use of reasonably available control technology. The state program must also contain a reduction in total allowable emissions prior to 1979 so as to provide the same level of emission reduction that would result from application of the offset regulation.⁹⁸ The difficulty of obtaining this

94. 41 Fed. Reg. 55,526 (1976).

95. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 129(a), 91 Stat. 745 (1977).

96. The conference report sheds no light on why Congress refused to go along with this part of the EPA's Interpretive Ruling. H.R. REP. No. 564, *supra* note 52, at 157.

97. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 129(a), 91 Stat. 745 (1977).

98. *Id.* Texas has been the only state to submit an application to waive the offset policy requirements. [1977] 8 ENVIR. REP. (BNA) 857. The Administrator rejected the application, saying that it was insufficient in many areas. *Id.* at 1238. Texas is facing a cut-off of EPA funds for its air pollution program because of its failure to implement the offset policy.

waiver will undoubtedly preclude its widespread use before the 1979 submittal date.

Because of the new requirements for waivers and suspensions, the revised 1979 SIP's will necessarily include several provisions not mandated by the 1970 Amendments. The 1977 Amendments require that all reasonably available control measures be provided as expeditiously as possible.⁹⁹ Furthermore, states will not have the option of postponing until the 1982 attainment date any necessary emission limitations, because of the requirement that the SIP achieve "reasonable further progress" in the interim pre-attainment date period.¹⁰⁰ Reasonable further progress is defined to mean "annual incremental reductions in emissions . . . which are sufficient in the judgment of the Administrator" to meet the mandatory attainment date.¹⁰¹ This requirement was clearly intended to prevent deferral until the end of the pre-attainment period the more difficult emission reductions that might complicate or render impossible timely attainment of standards.¹⁰²

One perceived weakness of the 1970 Amendments was the lack of public and local government participation in air pollution decisions.¹⁰³ Thus, an avowed purpose of the 1977 Amendments was to increase the involvement of state and local governments and the public in determining how best to achieve the health-based standards.¹⁰⁴ To this end, the newest amendments require that a revised SIP be the product of cooperative consultation between state and local govern-

99. Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. § 7502(b)(2) (West Supp. 1977).

100. *Id.* § 7502(b)(3).

101. *Id.* § 7501(1).

102. H.R. REP. NO. 294, *supra* note 52, at 212-23. The House bill originally required equal reductions over two-year periods leading up to the attainment date. H.R. 6161, 95th Cong., 1st Sess. § 117 (1977). The Senate bill had no requirement of reasonable further progress. S. 252, 95th Cong., 1st Sess. § 13 (1977). The Conference Committee acceded to the House requirement of progress but deleted the two-year period strategy. H.R. REP. NO. 564, *supra* note 52, at 158. The clear intent of the requirement was to avoid the last minute parade of horrors or shutdowns that had occurred in 1975 after the SIP's had deferred compliance until the last possible moment. *Id.*

103. Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. §§ 7502(b)(9), 7504 (West Supp. 1977). See also H.R. REP. NO. 564, *supra* note 52, at 156.

104. H.R. REP. NO. 294, *supra* note 52, at 1, 213-14. S. REP. NO. 127, *supra* note 5, at 2, states: "As with the 1976 Amendments, the legislation intends to strengthen the capability of that level of government most closely associated with an air pollution problem to deal with that problem."

ments.¹⁰⁵ Further, the SIP must identify and analyze the air quality, health, welfare, economic, energy, and social effects of the plan's provisions as well as list the alternatives considered and rejected by the state. This information then must be made available for public comment.¹⁰⁶

In another innovation, the 1979 SIP's must also contain an enforceable permit program requiring all new or modified major stationary sources in non-attainment areas to utilize Lowest Achievable Emission Rates (LAER).¹⁰⁷ Polluters are thus required to install the latest pollution control devices, even if they consider such devices unreasonable, if they wish to develop in the nation's non-attainment areas. LAER is intended to impose a more stringent requirement than those contained in the new source performance standards (NSPS) issued by the EPA under section 111.¹⁰⁸ In determining LAER, cost is to be given less weight than in the determination of NSPS.¹⁰⁹ Only in cases where the cost of any given technology is so great as to totally preclude construction of a major stationary source would cost factors prevail over public health considerations.¹¹⁰ This additional requirement for new or modified sources again makes it clear that cost considerations are secondary in decisions regarding the trade-offs between clean air and economic growth. It provides a further incentive for industry to develop less costly and more effective emission control devices.

Thus, the 1977 Amendments retain the basic structure of the 1970 Amendments insofar as they require attainment by a certain date.

105. Clean Air Act Amendments of 1977, § 129(b), 42 U.S.C.A. §§ 7502(b)(9), 7504 (West Supp. 1977).

106. *Id.* § 7502(b)(9).

107. *Id.* §§ 7501, 7502(b)(6), 7503.

108. H.R. REP. NO. 564, *supra* note 52, at 11.

109. *Id.* at 215. The House Report, in describing the House version finally accepted by the Conference, said this about LAER:

However, in light of the adverse air quality and health consequences of this new pollution, the committee concluded that all feasible efforts to reduce or control this new pollution should be mandated.

Furthermore, maximum pollution control from new sources is necessary in order to permit room for maximum potential economic growth. This is particularly true in light of the requirement for reasonable further progress and the indications that emissions from many existing sources in non-attainment areas will be increasing. . . . Finally the *technology-forcing* purpose of the act is best served by requiring maximum feasible pollution control from these new sources in dirty air areas.

Id. (emphasis added).

110. *Id.* See also H.R. REP. NO. 564, *supra* note 52, at 157.

New SIP requirements were added because of the difficult problems of attainment. Yet the original strategy, although bending in the winds of change, did not give way entirely.

2. Variances, Revisions and Extensions

As previously discussed, the section 110(f) mechanism for granting individual variances was unworkable. Yet after *Train* it was impossible to grant a variance that endangered attainment of an NPAAQS without using section 110(f).¹¹¹ An individual source variance in a non-attainment area could not be granted merely by revising the SIP. The Administrator's practice of using section 113 enforcement authority to approve compliance schedules extending beyond the attainment date was criticized as being blatantly illegal.¹¹² Substantial dissatisfaction with the variance and revision policy led to the passage of several different programs to replace the section 110(f) mechanism, whereby individual sources could receive variances from approved SIP's.

a. *Temporary Emergency Suspensions (TES)*

The "energy crisis," along with high inflation and high unemployment, was the stimulus for the development of a new kind of individual variance from the application of an SIP.¹¹³ Out of the severe winter of 1976-77 came a demand for some type of temporary variance or exception for sources that primarily utilized clean-burning natural gas but whose supplies had been curtailed to serve higher priority customers. The result was a last minute amendment to the House bill in 1976 that allowed Governors to issue Temporary Emergency Suspensions (TES).¹¹⁴ A TES grants a fuel-burning stationary source relief from the operation of an approved SIP for a maximum

111. See notes 64-76 and accompanying text *supra*.

112. See note 80 *supra*.

113. The energy crisis of 1974, by greatly increasing the demand for coal-fired electrical generating plants, triggered air pollution problems not associated with clean-burning natural gas or oil electrical generating plants. Congress reacted by passing the Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. §§ 791-98 (Supp. IV 1974). ESECA basically allowed the Administrator to waive any applicable SIP emission standard for a fuel-burning source unable to comply because of a lack of availability for certain fuels such as natural gas or low sulfur coal. 15 U.S.C. § 792 (Supp. IV 1974). That portion of ESECA which modified the 1970 Amendments was repealed in 1977. Clean Air Act Amendments of 1977, Pub. L. No. 95-95. § 112(b)(1), 91 Stat. 709 (1977).

114. H.R. REP. NO. 294, *supra* note 52, at 12-13.

of four months.¹¹⁵

The 1977 Amendments identify two situations in which a TES can be utilized. The section 110(e) TES is drawn principally from the original House version.¹¹⁶ A Governor's issuance of a TES must be preceded by a Presidential determination that a national or regional emergency energy or employment crisis exists.¹¹⁷ As originally proposed in the House bill, a TES could be issued by the Governor *alone* upon request by any stationary source for relief from the operation of the approved SIP for either energy or economic reasons.¹¹⁸ The requirement of a Presidential determination was added out of a fear that liberal use of TES authority by Governors more interested in economic problems and reelection concerns than in adverse health effects of air pollution could destroy the technology-forcing strategy of the SIP, especially in non-attainment areas. A Governor's issuance of a TES must also be preceded by a public hearing and based upon a finding that there exists in the vicinity of the source a temporary energy emergency involving high levels of unemployment or loss of residential energy supplies that could be "totally or partially alleviated" by the TES.¹¹⁹ The Governor may not issue a TES where the SIP is federally promulgated.¹²⁰ This provides an additional incentive for states to submit realistic technology-forcing SIP's that meet the primary criteria of attaining the NPAAQS by the mandated date. Where an SIP has been federally promulgated the President may grant a TES, once he makes the same findings as a Governor would be required to make.¹²¹

Prior approval by the EPA is not required before a TES becomes effective although the Administrator can, through the issuance of a disapproval order, suspend the effectiveness of the TES. However, administrative review of the TES is limited to a determination of whether the Governor made proper findings as to the existence of a

115. Clean Air Act Amendments of 1977, § 107(a), 42 U.S.C.A. § 7410(f)(3) (West Supp. 1977).

116. *Id.* See H.R. 6161, 95th Cong., 1st Sess. § 115 (1977).

117. Clean Air Act Amendments of 1977, § 107(a), 42 U.S.C.A. § 7410(f)(3) (West Supp. 1977).

118. H.R. 6161, 95th Cong., 1st Sess. § 115 (1977).

119. Clean Air Act Amendments of 1977, § 107(a), 42 U.S.C.A. § 7410(f)(2) (West Supp. 1977).

120. *Id.* § 7410(f)(4). The 1977 Amendments allow the Administrator to prepare and publish an SIP if the state either fails to submit its own SIP, or submits a plan not in accordance with the Clean Air Act's SIP requirements. *Id.* § 7410(a), (c).

121. *Id.* § 7410(f)(4).

requisite energy crisis and the ability of the TES to alleviate the emergency.¹²² Thus, the effect of the TES on the attainment plan cannot be considered by the Administrator. This narrow scope of review represents a departure from the original House bill, which would have authorized review to determine if the TES complied with section 110(a)(2).¹²³ It is not clear whether this reference in the House bill was a mistake or if the Conference Committee intentionally made the change, but the result allows the use of a TES to possibly delay attainment or permit violation of the NPAAQS. This indicates a further erosion of the technology-forcing strategy.

The 1977 Amendments also created a second form of TES intended to deal with the specific problem of plant closures due to stringent SIP requirements.¹²⁴ This section 110(g) TES can be utilized only if the state has submitted a revised SIP that has been neither approved nor disapproved by the Administrator within the mandated four month period.¹²⁵ The revised SIP must meet the requirements of section 110 and demonstrate that a revision is necessary to prevent the closing, for one year or more, of a source of air pollution, and that substantial increases in unemployment would result from such closing.¹²⁶ If the Administrator has not acted upon the requested revision within the required period, the Governor may issue a section 110(g) TES effective for a maximum of four months. The TES would have the effect of excusing the source from compliance with the current SIP emissions limitations, and imposing the proposed limitations until final federal approval or disapproval. This would insulate the source from citizen suits under section 304 for violation of an emission standard during the federal review process.¹²⁷ Unlike the section 110(f) TES, the issuance of a section 110(g) TES would probably not impair attainment by the mandatory date since the 110(g) TES can be issued only if the proposed SIP revision still targets attainment of the NPAAQS by the deadline. The Administrator can shorten the four month duration of the section 110(g) TES by issuing a disapproval notice if he determines that the TES does not meet the requirements

122. *Id.* § 7410(f)(3).

123. H.R. 6161, 95th Cong., 1st Sess. § 115 (1977).

124. Clean Air Act Amendments of 1977, § 107(a), 42 U.S.C.A. § 7410(g) (West Supp. 1977).

125. *Id.*

126. *Id.* at § 7410(g)(1)(B).

127. *See, e.g.,* Getty Oil Co. v. Ruckelshaus, 467 F.2d 349 (3d Cir. 1972), *cert. denied*, 409 U.S. 1125 (1973).

of an NPAAQS-attainable SIP and the probability of a plant closing unless the revision is approved.¹²⁸

These TES provisions contain certain safeguards designed to limit the ability of Governors to issue wholesale TES's as a means of avoiding the harsh technology-forcing character of an SIP. The House Report had specifically declared that the TES authority was to be sparingly used—that TES's were not intended to be a "chronic circumvention of the Act's requirements."¹²⁹ For long-term problems states were given other, more structured options also subject to review by the Administrator.¹³⁰ The House would have prohibited the use of consecutive TES's for the same "crisis."¹³¹ For any individual source to receive two suspensions it would have to adduce a second set of facts that would allow the Governor to make two separate and independent findings of emergency. The TES provisions requiring mandatory gubernatorial findings, review by the Administrator, a short four-month duration, and the ban on consecutive TES's for the same crisis all indicate congressional concern toward safeguarding the technology-forcing strategy. Nonetheless, the TES represents two new types of variances that weaken the overall strategy. Although the section 110(g) TES is somewhat limited and in no case can it prevent attainment of the NPAAQS, the section 110(f) TES is especially worrisome because it allows the NPAAQS to be violated for economic reasons.

b. *Primary Non-Ferrous Smelter Orders (PNSO's)*

In addition to responding to perceived national crises in unemployment and energy, Congress created a specialized type of variance provision for the primary non-ferrous smelter industry, an industry

128. The legislative history of this section is unclear. The House bill was very similar to what eventually became § 110(f) but there was no comparable version allowing a separate TES made necessary by delays in the administrative review process. Compare H.R. 6161, 95th Cong., 1st Sess. § 115 (1977) with Clean Air Act Amendments of 1977, § 107(b), 42 U.S.C.A. § 7410(g) (West Supp. 1977). The Conference Committee Report merely notes that the Senate amended the House version by restricting the Governors' economic TES powers to this limited situation. H.R. REP. NO. 564, *supra* note 52, at 125. The House version had a combined energy and economic TES with similar requirements. H.R. 6161, 95th Cong., 1st Sess. § 115 (1977).

129. H.R. REP. NO. 294, *supra* note 52, at 203.

130. Delayed compliance orders under § 121 of the House bill were cited as an example of these long-term variance provisions. *Id*

131. Again, the House Report made it clear that the Governor must use the TES authority judiciously and only under considerations of "substantial hardship" that could be traced directly to the SIP requirements. *Id*

which has a long history of fighting emission standards on grounds of technological and economic infeasibility.¹³² In fact, the battle to control smelter industry emissions is the archetype of the technology-forcing strategy's failure to stimulate needed technological development by the mandated attainment date. It represents an admission by Congress that the technology-forcing strategy can be compromised if the targeted industry fights the standards rather than developing the new technology—in effect betting that the government will not keep its shutdown promise.

The primary non-ferrous smelter industry has long complained that retrofitting its existing plants to achieve a substantial diminution in sulfur dioxide emissions is both technologically impossible and economically infeasible.¹³³ The industry proposed using only supplementary control systems (SCS) that do not limit stack gas emissions of sulfur dioxide, but rather attempt to minimize the deleterious effect on the ambient air quality through various dispersion enhancement techniques.

The House and the Senate in both 1976 and 1977 took differing views in this area, with the House approach prevailing in both the 1976 Conference Committee and the Amendments as enacted.¹³⁴ The 1976 House bill attempted to deal directly with the problems of primary non-ferrous smelters by granting them the right to seek up to two five-year compliance date extensions.¹³⁵ The House Report reflects congressional concern over some particularly difficult economic and technological questions in the area of constant emission reduction systems for existing and new primary non-ferrous smelters.¹³⁶

The 1977 House bill also treated PNSO's as a special type of delayed compliance order.¹³⁷ Smelters in existence at the time of the enactment of the 1977 Amendments could seek extensions of an

132. See, e.g., *Asarco, Inc. v. EPA*, 11 E.R.C. 1129 (D.C. Cir. 1978); *Bunker Hill Co. v. EPA*, 572 F.2d 1286 (9th Cir. 1977), *rehearing denied*, 11 E.R.C. 1204 (9th Cir. 1977); *Kennecott Copper v. EPA*, 526 F.2d 1149 (9th Cir. 1975), *cert. denied*, 425 U.S. 935 (1976); *Kennecott Copper v. Train*, 424 F. Supp. 1217 (D. Nev. 1976).

133. See cases cited note 132 *supra*. See also *1974 Oversight Hearings*, *supra* note 44, pt. 1 at 239-77 (statement of Frank Milliken, President of Kennecott Copper Co.); *id.* pt. 2 at 1382-85 (statement of American Smelting and Refining Co.).

134. Compare S. 3219, 94th Cong., 2d Sess. § 117 (1976) with H.R. 6161, 95th Cong., 1st Sess. § 103 (1977) and Clean Air Act Amendments of 1977, § 117(b), 42 U.S.C.A. § 7419 (West Supp. 1977).

135. H.R. 10498, 94th Cong., 1st Sess. § 106 (1975).

136. H.R. REP. NO. 1175, *supra* note 47, at 44-46.

137. H.R. 6161, 95th Cong., 1st Sess. § 103 (1977).

otherwise applicable emission standard for sulfur dioxide through January 1, 1983.¹³⁸ A second extension was possible through January 1, 1988.¹³⁹ The PNSO would be available if the smelter was unable to comply because no system of continuous emission limitation had been "adequately demonstrated to be reasonably available."¹⁴⁰

The 1977 Amendments, reflecting the House approach, treat non-ferrous smelters as a specialized problem.¹⁴¹ Existing non-ferrous smelters are eligible for two five-year PNSO's, the first extending to 1983, and the second to 1988.¹⁴² The PNSO can be issued by the Administrator or by the state, although the state-issued PNSO will not become effective until the Administrator determines that the order was issued in accordance with the statutory requirements.¹⁴³ PNSO's can be issued for existing smelters that are unable to comply with the requirement of an approved SIP for sulfur dioxide emission because no adequate technology has been demonstrated to be reasonably available.¹⁴⁴ The initial PNSO may be issued without notice or public hearing except where the Administrator has disapproved a state-issued PNSO, or where the smelter is seeking a waiver from all constant emission control requirements in order to avoid cessation of activities.¹⁴⁵ All PNSO's must contain interim control measures to assure attainment and maintenance of NPAAQS and national secondary standards during the duration of the PNSO.¹⁴⁶ These interim measures must include compliance with reporting and monitoring requirements and such other measures that the Administrator deems "necessary to avoid an imminent and substantial endangerment to the health of persons."¹⁴⁷ In addition, smelters must utilize continuous emission control systems. However, a smelter may obtain a waiver of this requirement if, after an adjudicatory hearing, the Ad-

138. *Id.*

139. *Id.*

140. *Id.*

141. Compare H.R. REP. NO. 564, *supra* note 52, at 137-38 with Clean Air Act Amendments of 1977, § 117(b), 42 U.S.C.A. § 7419 (West Supp. 1977).

142. Clean Air Act Amendments of 1977, § 117(b), 42 U.S.C.A. § 7419 (West Supp. 1977).

143. *Id.* § 7419(a)(1)(A)-(B). A polluter has the option of applying for a PNSO or a § 113(d) Delayed Compliance Order, but not both.

144. *Id.* § 7419(b)(1)-(3).

145. *Id.* § 7419. See also H.R. REP. NO. 564, *supra* note 52, at 138.

146. Clean Air Act Amendments of 1977, § 117(b), 42 U.S.C.A. § 7419(d) (West Supp. 1977).

147. *Id.*

ministrator determines that compliance would be so costly as to cause a temporary or long-term cessation of operations.¹⁴⁸

The 1977 Amendments also retained the Administrator's authority to bring an enforcement action, revoke the PNSO, or give notice of non-compliance for purposes of imposing a non-compliance penalty for the violation of any requirement of the PNSO including threatening attainment or maintenance of a NPAAQS.¹⁴⁹

The problem with primary non-ferrous smelters is the paradigm case of the battle between clean air and economic or technological feasibility. In this case the Administrator had concluded that the costs of technically proven control systems for existing and new smelters were so great that they could not be absorbed or passed on without causing mine closings, loss of sales, and substitution of foreign imports not hampered by pollution control requirements.¹⁵⁰ Under the technology-forcing strategy shutdown would be required in any case where the smelter would cause a violation of NPAAQS. The House version of the bill apparently would have avoided shutdown but would have allowed enforcement actions in the event of violations of NPAAQS caused by a confluence of several factors, including increased production and emissions, atmospheric conditions, and others. The Senate version was less precise in demanding attainment of the NPAAQS as a prerequisite to issuance of a PNSO.¹⁵¹ Since the 1977 Amendments primarily relied on the House version of the PNSO strategy, the legislative history of the House bill is a strong

148. *Id.*

149. *Id.* § 7419(f). This language was taken directly from the House bill. H.R. 6161, 95th Cong., 1st Sess. § 103 (1977). See also H.R. REP. NO. 294, *supra* note 52, at 61-62.

150. H.R. REP. NO. 294, note 52 *supra*.

151. The 1976 Senate bill authorized an SIP to contain Supplementary Control Systems for existing primary non-ferrous smelters where they were enforceable and would not hinder attainment of the NPAAQS. See S. 3219, 94th Cong., 2d Sess. § 117 (1976). However, the 1976 Senate Report indicates that SCS were to be strictly supplementary, implying that continuous emission standards were to be imposed and attained before SCS could be utilized. S. REP. NO. 717, *supra* note 47, at 152. The Senate Committee also emphasized the need for further industry and government research to develop a feasible constant emission technology, thereby endorsing the EPA's requirement that the polluter commit resources for research in this area before any SCS would be allowed. *Id.* This requirement of private on-going research was accepted by the Ninth Circuit as a valid condition for a variance or compliance order. See *Kennecott Copper v. EPA*, 526 F.2d 1149, 1151 (9th Cir. 1975). The 1977 Senate bill took essentially the same approach. See S. REP. NO. 127, *supra* note 5. Since the SCS provision was made a part of the SIP process, the use of SCS could never threaten the attainment or maintenance of NPAAQS. *Id.* at 24-25, 144.

indication that Congress did not intend to diminish its mandate to achieve the NPAAQS even at great cost.¹⁵² The House Report stated: "Attainment and maintenance of the national primary and secondary ambient air quality standards would be required at all times under this provision."¹⁵³ The PNSO reaffirms the *Train* finding that Congress did not intend to mandate a technology-forcing strategy where the NPAAQS were already attained and the public health protected. Thus Congress has given smelters a specialized exemption only when they are located in an area that is not in violation of any NPAAQS or secondary standard.

c. *Innovative Technology Waivers (ITW)*

Under the 1970 Amendments all new stationary sources of air pollution were directly controlled by the EPA through the development of new source performance standards (NSPS).¹⁵⁴ NSPS were designed to require the use of the best adequately demonstrated technology.¹⁵⁵ The Administrator, in ascertaining whether the technology was adequately demonstrated, was to consider the cost of achieving desired reductions. The NSPS thus were not technology-forcing since they did not necessarily require development of new technology, even though that was one of the stated purposes of the NSPS.¹⁵⁶ In response to a perceived need to provide more incentives for technological development applicable to new stationary sources, the 1977 Amendments provide for Innovative Technology Waivers (ITW),¹⁵⁷ a concept first proposed in the 1976 House bill.¹⁵⁸ ITW's allow new stationary sources to receive a waiver from NSPS during the development process that excuses them from having to install already-developed technology to achieve NSPS.

Both the Senate¹⁵⁹ and the House¹⁶⁰ included ITW proposals in

152. H.R. REP. NO. 294, *supra* note 52, at 61-63, 68-69.

153. *Id.* at 62.

154. Clean Air Act of 1970, § 111, 42 U.S.C. § 1857c-6 (1970) (currently codified at 42 U.S.C.A. § 7411 (West Supp. 1977)).

155. Clean Air Act of 1970, § 111(a)(1), 42 U.S.C. § 1857c-6(a)(1) (currently codified at 42 U.S.C.A. § 7411(a)(1) (West Supp. 1977)).

156. H.R. REP. NO. 1175, *supra* note 47, at 168-69.

157. Clean Air Act Amendments of 1977, § 109, 42 U.S.C.A. § 7411(k) (West Supp. 1977).

158. H.R. 10498, 94th Cong., 2d Sess. § 112 (1976).

159. S. REP. NO. 127, note 5 *supra*

160. H.R. REP. NO. 294, note 52 *supra*. See also H.R. REP. NO. 564, note 52 *supra*.

their 1977 bills, but the final version of the 1977 Amendments basically mirrored the House provisions.¹⁶¹ As enacted, there are several safeguards designed to ensure that ITW's are sparingly and justifiably issued. First, the new system must utilize a continuous emission system.¹⁶² Second, only the federally-promulgated NSPS can be waived.¹⁶³ Thus, if the state has a more stringent emission standard the ITW would not operate. Third, the new source must obtain written consent from the governor of the state in which it desires to locate.¹⁶⁴ Fourth, notice and a public hearing must be afforded for the Administrator's determination that the proposed system has not been adequately demonstrated, that it will operate effectively, and that it will achieve a greater rate of continuous emission reduction than presently required by NSPS. The owner has the burden of showing that the ITW will not threaten the public health, safety, or welfare and that the duration of the ITW will not exceed the period deemed necessary to adequately demonstrate that the new technology is indeed an improvement on the existing NSPS.¹⁶⁵ Finally, the ITW cannot be issued where emissions from the proposed source will threaten the attainment of any NPAQS or NSAAQS, and the Administrator is authorized to impose conditions to ensure that no such violation occurs.¹⁶⁶ Thus, the technology-forcing strategy of the NPAQS-SIP process cannot be circumvented by the use of ITW's. The ITW cannot be granted for a period of more than seven years, and will automatically expire four years after the date the source begins operation.¹⁶⁷ If the Administrator feels that the new technology is not

161. The Senate had not included an ITW provision in its version of the 1976 Amendments. However, the final 1976 bill that emerged from the Conference Committee included the basic House provisions for ITW's, with some minor changes involving extensions and time limits, which together made the ITW less flexible and shorter in duration. H.R. REP. NO. 1742, *supra* note 90, at 89-90. Compare S. 3219, 94th Cong., 2d Sess. § 109(a) (1976) with H.R. 10498, 94th Cong., 2d Sess. § 112 (1976). The 1977 Senate bill would have reduced the ten-year ITW originally proposed in the House bill to a limited three-year waiver designed to encourage experimentation with new technology while reemphasizing the need to protect the public health. S. REP. NO. 127, *supra* note 5, at 43. Compare S. 252, 95th Cong., 1st Sess. § 9 (1977) with H.R. 10498, 94th Cong., 2d Sess. § 112 (1976).

162. Clean Air Act Amendments of 1977, § 109, 42 U.S.C.A. § 7411(k) (West Supp. 1977).

163. *Id.*

164. *Id.*

165. *Id.* § 7411(k)(1)(A)(i)-(iv).

166. *Id.* § 7411(k)(1)(B).

167. *Id.* § 7411(k)(1)(E). The original House proposal was for an ITW of up to

being generated, he may terminate the ITW prior to its expiration date and give the source a maximum of three years in which to achieve NSPS.¹⁶⁸

Although ITW's create another individual source extension not permitted under the 1970 Amendments, their availability is so limited that they cannot subvert the basic technology-forcing strategy of the Act. In fact, the legislative history makes quite clear that the primary purpose of ITW's is to encourage technological innovations for new sources, thus aiding in the drive to attain and maintain NPAAQS by lowering the total amount of emissions into the ambient air.¹⁶⁹ Thus, ITW's provide an impetus, lacking in the 1970 Amendments, for developing new source technology that would speed attainment of NPAAQS in those areas presently in violation.

d. *Coal Conversion Extensions (CCE)*

With the Arab oil embargo came the realization that electrical generating plants burning oil and natural gas were dependent on a foreign supply that was both expensive and subject to immediate curtailment.¹⁷⁰ One of the main objectives of President Carter's recently announced National Energy Plan is the conversion of generating plants into coal-fired facilities because of the rapid depletion of domestic oil and natural gas supplies.¹⁷¹ The National Energy Plan, however, was not the first attempt to reconcile the twin goals of energy independence and clean air. The Energy Supply and Environmental Coordination Act of 1974 (ESECA), which amended the Clean Air Act of 1970, allowed generating plants to waive compli-

ten years. H.R. 10498, 94th Cong., 2d Sess. § 112 (1976). The 1977 Senate bill proposed a three-year maximum. S. 252, 95th Cong., 1st Sess. § 9 (1977). See also S. REP. NO. 127, *supra* note 5, at 43.

168. Clean Air Act Amendments of 1977, § 109, 42 U.S.C.A. § 7411(k)(2)(A) (West Supp. 1977).

169. H.R. REP. NO. 1175, *supra* note 47, at 170. The House Committee stated that, "(w)ith these changes, the Committee believes that the availability of innovative technology variances should help spur the development and use of new technology without endangering public health or the environment." *Id.* A House Report noted that the 1970 Amendment's use of NSPS would encourage a market for the development of new technology that would merely encourage research and development of new technology by companies marketing such devices and *not* by the emitters themselves, who would be safer in merely installing a known quantity (NSPS). H.R. REP. NO. 1175, *supra* note 47, at 168.

170. See generally ENERGY POLICY AND PLANNING, EXECUTIVE OFFICE OF THE PRESIDENT, THE NATIONAL ENERGY PLAN 1-23 (1977).

171. *Id.* at 63-66.

ance with applicable SIP's if the plants were either under a coal conversion order issued by the Federal Energy Administration or could not obtain the low-sulfur coal or natural gas needed to attain the SIP emission limitations.¹⁷² The stopgap measure was both procedurally and substantively complex. In addition, coal burning plants were mentioned in a 1975 EPA Report as a notable exception to the otherwise high percentage of compliance by major stationary sources.¹⁷³ This kind of tension between energy and environmental demands, as reflected in the ESECA, was present in debating the utility of specialized exceptions for coal burning electrical generating plants.¹⁷⁴

In 1976, both the Senate and the House bills included provisions for Coal Conversion Extensions (CCE), and sought to provide a more relaxed standard for issuance than allowed under ESECA.¹⁷⁵ The ESECA did not allow extensions in areas where the NPAAQS was not attained for the particular pollutant in question.¹⁷⁶ This so-called "regional limitation" made CCE's unavailable in areas that often were most in need of relief. The 1976 House version sought to modify the regional limitation by making rebuttable the presumption that a CCE should not issue in non-attainment areas.¹⁷⁷ The Senate bill

172. Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. §§ 791-98 (Supp. IV 1974). ESECA added a new section to the 1970 Amendments, dovetailing with the newly developed Federal Energy Administration's authority to control use of fuels. See note 113 *supra*.

173. EPA, STATE AIR POLLUTION IMPLEMENTATION PLAN 12, 14 (1975).

174. See, e.g., *Clean Air Act Amendments—1975: Hearings on H.R. 2633 & H.R. 2650 Before the Subcomm. on Health and the Environment of the House Comm. on Interstate and Foreign Commerce*, 94th Cong., 1st Sess. 313-19 (1975) (testimony of William Barclay, American Medical Association); *id.* at 744-842 (testimony of William Lalor, Edison Electric Inst.); *id.* at 822-90 (testimony of David Swan, American Mining Cong.). See also *1974 Senate Oversight Hearings*, *supra* note 44, at 3-30, 65-184 (testimony of Aubrey Watner, Tennessee Valley Auth.); *id.* at 30-65 (testimony of A. Joseph Dowd, American Electric Power Co.); *id.* at 265-87 (testimony of Frank Milliken, Kennecott Copper Corp.); *id.* at 649-93 (testimony of C. Howard Hardesty, Continental Oil Co.).

175. H.R. 10498, 94th Cong., 2d Sess. § 106 (1976); S. 3219, 94th Cong., 2d Sess. § 15 (1976).

176. Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. § 792 (Supp. IV 1974).

177. H.R. REP. NO. 1175, *supra* note 47, at 61, 325-26. See note 182 *infra*. The House bill would have liberalized the duration of the CCE by allowing an initial exemption until January 1, 1980, and making possible an additional five-year extension. *Id.* at 61. The bill would have broadened the class of sources eligible for CCE's by including those plants indicating an intention to convert to coal but which had been prevented by an FEA order from making the switch. *Id.* The only safeguards designed to protect the public health and maintain the technology-forcing

eliminated the regional limitation wording, substituting a provision whereby the state could, in granting the CCE, require such interim measures as were necessary to insure that the attainment or maintenance of a NPAAQS was not threatened.¹⁷⁸

The 1976 Conference Committee, although basically adopting the Senate version, retained two important aspects of the House bill by maintaining the regional limitation as a rebuttable presumption, and placing the power to deny a CCE in the hands of the EPA rather than the states.¹⁷⁹ The Committee also limited the CCE to a maximum three-year period following either the FEA curtailment order or the emitter's notice of intent to convert to coal, but in no case would the CCE extend beyond July 1, 1980.

After the 1976 Amendments failed to secure passage, both the House and the Senate returned to their pre-1976 Conference positions.¹⁸⁰ The 1977 Conference Committee, reaching a different result than the 1976 Conference, added safeguards against abuse of the CCE while allowing for greater use of extensions. As finally enacted, the 1977 Amendments returned the basic CCE program to the Administrator rather than the states.¹⁸¹ Following the approach taken by the 1976 compromise, the 1977 Amendments modify the regional limitation requirement by making it a rebuttable presumption.¹⁸²

strategy were the requirements that both the Governor and the Administrator grant approval only after a finding that the general welfare would not be harmed. *Id.*

The House Report specifically refers to the problem of the CCE causing harm to tourist income and agricultural pursuits even in cases where only the NSAAQS were being violated. In such a case the Administrator could, in his discretion, deny the CCE. *Id.*

178. S. 3219, 94th Cong., 2d Sess. § 15 (1976), as reported in S. REP. NO. 717, *supra* note 47, at 170. The Senate version sought to transfer administration of the CCE program from the EPA to state air pollution control agencies. *Id.* at 45-46. The Administrator's review role, to ascertain whether the CCE threatened the general welfare, was eliminated—in keeping with the Senate's intent to shift as much power as possible back to the states. *Id.* at 46.

179. H.R. REP. NO. 1742, *supra* note 90, at 14-15, 93-94.

180. The 1977 versions of the bill were identical to the pre-1976 Conference positions, except that both the House and Senate extended the final compliance date to July 1, 1981. See H.R. REP. NO. 294, *supra* note 52, at 6, 79-81; S. REP. NO. 127, *supra* note 5, at 58-60, 166-68. Given this return to previous positions, one might have predicted that the 1977 Conference would reach the same result as the 1976 Conference.

181. Clean Air Act Amendments of 1977, § 112(a), 42 U.S.C.A. § 7413(d)(5)(B) (West Supp. 1977).

182. To rebut this presumption, the source must convince the Administrator, after notice and public hearing, that the pollutant emissions from such source (i) will only

The Administrator was vested with power to grant CCE's in non-attainment areas or to sources that might otherwise threaten NPAAQS attainment.¹⁸³ The Administrator was also given the duty to prescribe interim emission limitations to insure that the burning of coal will not produce emissions which cause or contribute to concentrations of any pollutant in excess of any NPAAQS. The final compliance date for any CCE is December 31, 1980, despite the fact that both the 1977 Senate and House bills had proposed a July 1, 1981, deadline.¹⁸⁴ However, the Amendments also allowed coal-fired generating facilities to apply for Delayed Compliance Orders (DCO) upon expiration of a CCE, thus extending final compliance an additional five years.¹⁸⁵

By retaining the "regional limitation" as a rebuttable presumption, and maintaining the primary standard condition as an overall safeguard against wholesale granting of health-threatening CCE's, the public health seemingly remains well protected. Thus, the stipulation that a facility receiving a CCE through 1980 could then receive a CDE, if qualified, did minimal damage to the integrity of the technology-forcing aspects of the 1977 Amendments. Clearly, CCE's will not enable coal-burning plants to undermine public health. Such facilities are required to continue their efforts to develop the necessary technology that will avoid contributing to violations of a NPAAQS.

e. *Delayed Compliance Orders and Non-Compliance Penalties*

Unlike the four extensions previously discussed, the provisions creating Delayed Compliance Orders (DCO) and Non-Compliance Penalties (NCP) represent a basic departure from the technology-forcing strategy of the 1970 Amendments. DCO's permit individual source extensions beyond NPAAQS attainment dates, while NCP's impose monetary penalties for continued operation. The requirement that a source's emission not cause a violation of NPAAQS, present in other extensions under the 1977 Amendments, is noticeably absent from

infrequently affect air quality concentrations for that pollutant in the AQCR; (ii) will only have an insignificant effect on the air quality concentrations in each portion of the region where the NPAAQS is being exceeded; and (iii) will, with reasonable statistical assurance, not cause or contribute to air quality concentrations in excess of NPAAQS. Clean Air Act Amendments of 1977, § 112(a), 42 U.S.C.A. § 7413(d)(5)(D)(i)-(iii) (West Supp. 1977).

183. *Id.*

184. *Id.* § 7413(d)(5)(A). See note 180 *supra*.

185. Clean Air Act Amendments of 1977, § 14(a), 42 U.S.C.A. § 7413(d)(5)(A) (West Supp. Feb. 1978).

the DCO and NCP procedures. Hence, the source need not develop technology insofar as it is not forced to reduce emissions to a mandated level.

The need for DCO's was perceived to be particularly acute since, in many areas, attainment dates had already passed without NPAAQS having been achieved.¹⁸⁶ Technically, a source not in compliance with the approved SIP in a non-attainment area could be forced to shut down, either by state or federal action or through a citizen suit under section 304. The prevalent state and federal practice of granting variances for individual sources in disregard of the attainment date appeared unauthorized and patently illegal. Moreover, such variances did not insulate the emitter against a citizen suit forcing shutdown, even if the state or federal governments were estopped to take enforcement actions.¹⁸⁷ Additionally, of the estimated 200,000 stationary sources subject to SIP requirements, some 20,000 are major stationary sources emitting eighty-five percent of all stationary source air pollution.¹⁸⁸ Of these major emitters only eighty-four percent were in compliance, leaving 3,200 major sources facing shutdown orders.¹⁸⁹ The problem was compounded by the fact that many of the major sources identified by the EPA as significant trouble spots were also key industries in terms of employment and overall economic importance. These included coal-fired electrical generating plants, petroleum refineries, and the steel industry.¹⁹⁰ It seemed clear to Congress in 1976 that plant shutdowns mandated by the technology-forcing strategy could not occur without severe economic disruption. The section 110(f) variance mechanism, while still available, seemed ineffective in light of the large numbers of non-complying major sources.¹⁹¹

These concerns led the Senate in 1976 to develop the DCO-NCP

186. EPA, STATE AIR POLLUTION IMPLEMENTATION PLAN 1-4 (1975).

187. See notes 200 and 208 *infra*.

188. EPA, STATE AIR POLLUTION IMPLEMENTATION PLAN 9 (1975).

189. *Id.* at 13.

190. *Id.* at 13-17. For an in-depth study of the steel industry's problem in meeting both air and water pollution standards, see COUNCIL ON ECONOMIC PRIORITIES, ENVIRONMENTAL STEEL UPDATE (1977); COUNCIL ON ECONOMIC PRIORITIES, ENVIRONMENTAL STEEL (1975). For an in-depth study of the problems of electric utilities, see COUNCIL ON ECONOMIC PRIORITIES, PRICE OF POWER UPDATE (1977); COUNCIL ON ECONOMIC PRIORITIES, PRICE OF POWER (1975).

191. See *Union Elec. Co. v. EPA*, 427 U.S. 246, 271 (Powell, J., concurring) (justifying noncompliance with the Clean Air Act's "inflexible demands").

strategy as an alternative to technology-forcing.¹⁹² The Senate placed development of this new strategy high on its priority list in order to prevent major shutdowns.¹⁹³ Consonant with its desire to decentralize enforcement and administrative authority,¹⁹⁴ the 1976 Senate bill proposed giving the state primary authority to issue DCO's on its own initiative.¹⁹⁵ The DCO was to extend compliance dates for individual sources through January 1, 1979, even though the bill did not extend the attainment dates for NPAAQS.¹⁹⁶ The Administrator's role was to be limited to a review of the state-issued DCO within a 90-day period solely for the purpose of determining whether the DCO met the statutory requirements. If the Administrator determined that the statutory requirements had not been met, he would then issue a DCO after ensuring that the statutory mandate had been complied with.¹⁹⁷

The Senate eliminated the section 110(f) requirement that the Administrator must determine the good faith of the polluter prior to granting a DCO, stating that it would unnecessarily lengthen the procedure for DCO issuance.¹⁹⁸ The 1976 Senate bill also sought to deal with already-issued compliance orders that had extended beyond the attainment date.¹⁹⁹ Those orders were to be modified so that the latest date for compliance would be January 1, 1979, and all provisions in such orders inconsistent with the DCO or NCP requirements were

192. The 1976 bills referred to the DCO and NCP as "compliance date extension orders" and "noncompliance penalties," but for the sake of clarity they will be referred to as DCO's and NCP's, the labels given them by the 1977 Amendments. Compare S. 3219, 94th Cong., 2d Sess. § 9 (1976) with Clean Air Act Amendments of 1977, §§ 112, 118, 42 U.S.C.A. §§ 7413, 7420 (West Supp. Feb. 1978).

193. S. REP. NO. 717, *supra* note 47, at 4.

194. See note 178 *supra*.

195. S. 3219, 94th Cong., 2d Sess. § 9(a) (1976) as reported in S. REP. NO. 717, *supra* note 47, at 34-35, 169. Under the Senate bill a state could issue a DCO after notice and a public hearing, provided the DCO (1) contained a schedule and timetable for compliance; (2) contained any interim control measures deemed reasonable by either the state or the Administrator; (3) required monitoring and reporting by the source; (4) provided for compliance as expeditiously as practicable; and (5) contained, for major emitting facilities, a provision for imposition of an NCP if the source failed to comply by January 1, 1979. *Id.*

196. *Id.*

197. *Id.*

198. S. REP. NO. 717, *supra* note 47, at 34.

199. See note 208 *infra*. The Senate clearly felt that these orders issued under § 113(a), 42 U.S.C. § 1857c-8(a) (1970), were illegal. S. REP. NO. 717, *supra* note 47, at 34-35.

to be rendered void.²⁰⁰ Thus while the attainment date for NPAAQS remained the same, the date for final compliance by individual sources was to be extended to January 1, 1979, eliminating the shutdown alternative as an incentive for the emitter to develop new technology needed to achieve NPAAQS.²⁰¹

As a substitute for the shutdown alternative, the Senate developed the NCP, which was to be imposed only upon those sources not meeting the extended compliance date of January 1, 1979.²⁰² All major emitting facilities²⁰³ with compliance dates beyond January 1, 1978, were to supply the Administrator with certain information by January 1, 1977, so that he could determine the NCP to be imposed if compliance was not attained by January 1, 1979.²⁰⁴ The ostensible purpose of the NCP was to eliminate the economic advantage of non-compliance for major emitting facilities by making it cheaper to comply than to pay the attorney's fees needed to defeat implementation and enforcement.²⁰⁵ The NCP was to be computed to equalize the full cost of compliance, calculated over a period of ten years. To alleviate hardship it was to be paid monthly. The states, acting under guidelines to be promulgated by the Administrator, were to be given primary authority in setting NCP's, with the Administrator retaining authority to review state-set NCP's and revise them upwards if he deemed them too low.²⁰⁶ The Senate thus sought to end the six-year pattern of court-imposed delay that the shutdown alternative produced under the 1970 Amendments.²⁰⁷

200. S. 3219, 94th Cong., 2d Sess. § 9(a) (1976) *as reported in* S. REP. NO. 717, *supra* note 47, at 171.

201. The 1976 Senate bill also created two special kinds of NCO's: one for sources which were undergoing a "change in production process" and another for those sources utilizing new technology. *See* S. REP. NO. 717, *supra* note 47, at 36-37. *See also* notes 246-54 and accompanying text *infra*.

202. S. 3219, 94th Cong., 2d Sess. § 9(b) (1976). *See generally* S. REP. NO. 717, *supra* note 47, at 38-39.

203. Major emitting facilities are defined to include those stationary sources having the potential to emit 100 tons of pollutants per year. S. 3219, 94th Cong., 2d Sess. § 33 (1976) *as reported in* S. REP. NO. 717, *supra* note 47, at 221.

204. *See generally* S. REP. NO. 717, *supra* note 47, at 38.

205. The Senate Report explains: "Without some new, effective and fair tool for enforcement, many sources continue to find the fees paid to attorneys to resist the requirements of law less expensive than pollution control equipment." *Id.*

206. S. 3219, 94th Cong., 2d Sess. § 9(b) (1976) *as reported in* S. REP. NO. 717, *supra* note 47, at 39.

207. *See, e.g.,* Kramer I, note 3 *supra*; Kramer II, note 6 *supra*; La Pierre, note 6 *supra*.

The 1976 House bill totally eliminated the Section 110(f) variance provision and completely reworked the DCO process.²⁰⁸ The House bill proposed a complex procedural system. The DCO process was to be initiated by an application from the owner or operator of the stationary source. The Administrator could be the issuing authority if written permission was given by the governor of the affected state, or the state could issue the DCO to major stationary sources. In the latter situation, the DCO for a major stationary source was to be subject to substantive review by the Administrator, although DCO's for small stationary sources were to be subject only to procedural review.²⁰⁹

The House bill differed from the Senate's in other respects as well. The House clearly intended to allow DCO's to be issued even though the NPAAQS were not attained within the relevant AQCR, although the compliance dates for other stationary sources not receiving DCO's were not to be extended.²¹⁰ As proposed, the DCO could extend the compliance deadline for a particular source up to five years past the attainment date.²¹¹ By imposing a new mandatory deadline, and coupling it with interim control requirements, the House sought to maintain an incentive to develop new technology while simultaneously protecting the public health as well as preventing serious economic disruptions due to plant closures.²¹² The House reinforced the technology-forcing aspects of the DCO process by emphasizing that the DCO was only a discretionary tool in the hands of the Administrator. In all cases the burden of proving that all statutory requirements were satisfied was placed upon the emitter, with the Administrator having discretion to deny the permit.²¹³ The House

208. See H.R. REP. NO. 1175, *supra* note 47, at 38. The House also believed that the Administrator's practice of issuing § 113(a) orders beyond the attainment date was illegal and ill-founded. *Id.*

209. H.R. 10498, 94th Cong., 2d Sess. § 103 (1976) *as reported in* H.R. REP. NO. 1175, *supra* note 47, at 331.

210. H.R. REP. NO. 1175, *supra* note 47, at 38-39.

211. H.R. 10498, 94th Cong., 2d Sess. § 121 (1976). See generally H.R. REP. NO. 1175, *supra* note 47, at 47-48.

212. H.R. REP. NO. 1175, *supra* note 47, at 47-49.

213. *Id.* at 50-51. The House Report said:

Second, the technology-forcing reasons referred to previously favor a discretionary CDE authority. If a CDE were mandated whenever the conditions of section 121(c) were met, sources might be encouraged to devote their sole or primary effort to perfecting their case for a CDE, rather than to the task of research and development to make available the equipment needed to comply.

Id.

recognized that it was opening the door to consideration of economic and technological feasibility claims, but concluded that the door was only slightly ajar.²¹⁴

The House, like the Senate, had decided that the regulatory "all-or-nothing" shutdown approach utilized in the 1970 Amendments was inadequate. However, each house emphasized different factors in developing its own NCP system.²¹⁵ The Senate intended to give emitters a two-year grace period by providing for no payment of a NCP prior to January 1, 1979. The House, on the other hand, wanted a more immediate cessation of non-complying emissions, and thus proposed allowing the Administrator to impose a NCP as a condition to the granting of any DCO if certain findings were made.²¹⁶ Under the House bill, if the source seeking the DCO was a major emitting facility and the circumstances prompting the DCO request were not primarily beyond the facility's control, then the imposition of a NCP was made mandatory. The NCP could be imposed only after the Administrator gave notice and held a formal adjudicatory hearing.²¹⁷ Under the House version the NCP was both a penalty and a fine, since fault was a relevant factor in the setting of the NCP. This differed from the Senate version, which was primarily concerned with the recoupment of the economic advantage of non-compliance rather than in penalizing the bad faith emitter.²¹⁸ These differences were resolved in the 1976 Conference Report, which basically incorporated the Senate provisions for both the DCO and NCP with only minor amendments.²¹⁹

In 1977 the House reacted to the defeat of the 1976 Amendments by making some important and substantial departures from its 1976 position.²²⁰ In an attempt to simplify the complex 1976 DCO provisions, the House Committee liberalized the DCO process by eliminating the five grounds for the granting of a DCO, proposing instead a

214. *Id.* at 51.

215. H.R. 10498, 94th Cong., 2d Sess. § 105 (1976). *See generally* H.R. REP. NO. 1175, *supra* note 47, at 54-58.

216. H.R. 10498, 94th Cong., 2d Sess. § 105 (1976).

217. *Id.* *See also* H.R. REP. NO. 1175, *supra* note 47, at 57.

218. *Compare* H.R. 10498, 94th Cong., 2d Sess. § 105 (1976) *with* S. 3219, 94th Cong., 2d Sess. § 9(b) (1976). *See also* H.R. REP. NO. 1175, *supra* note 47, at 59; S. REP. NO. 717, *supra* note 47, at 39-40.

219. H.R. REP. NO. 1742, *supra* note 90, at 90-92.

220. *Compare* H.R. 6161, 95th Cong., 1st Sess. § 103 (1977) *with* H.R. 10498, 94th Cong., 2d Sess. § 103 (1976). *See generally* H.R. REP. NO. 294, *supra* note 52, at 59.

catch-all requirement that the source be unable to comply with the original deadline.²²¹ The Committee reiterated the basic concept that allowed DCO's to be issued in non-attainment areas even if the stationary source's non-compliance was a cause of non-attainment.²²² The new bill, like the 1976 Senate version, did not require an application from a source and allowed either the state or Administrator to issue the DCO. Finally, where the 1976 House bill called for an adjudicatory hearing prior to the issuance of the DCO, the 1977 bill merely required an informal legislative-type hearing.²²³ This last amendment reflected the EPA position that section 110(f) was unworkable primarily because it triggered an adjudicatory hearing process for thousands of sources, a process which the EPA was not equipped to handle.²²⁴

The 1977 House bill also proposed several substantial changes in the NCP process in conformity with the Senate's goal of eliminating the economic advantage of non-compliance and thus encouraging compliance as soon as practicable.²²⁵ The new NCP was to be applied primarily to major stationary sources that were in violation of an applicable implementation plan. It would also apply to any stationary source violating a hazardous emission standard or NSPS, or which was granted a DCO, CCE or PNSO and was not in compliance with the applicable interim emission standards.²²⁶ The NCP would not apply to a source issued a DCO if non-compliance was due to an FEA order to utilize a different fuel, or to a source holding a DCO and able to sustain the burden of showing that its inability to comply was due to circumstances beyond its control.²²⁷ Unlike the 1976 bill, the NCP would not be immediately applicable but would allow the source a two-year "grace" period in which to comply voluntarily with applicable emission standards. The NCP procedural process was left basically unchanged. Finally, the NCP amount was to be the equivalent of the compliance costs alone.²²⁸

221. H.R. REP. NO. 294, *supra* note 52, at 56-57.

222. H.R. 6161, 95th Cong., 1st Sess. § 103 (1977).

223. Compare H.R. 6161, 95th Cong., 1st Sess. § 103 (1977) with H.R. 10498, 94th Cong., 2d Sess. § 103 (1976). See generally H.R. REP. NO. 294, *supra* note 52, at 58-59.

224. See note 65 *supra*.

225. H.R. REP. NO. 294, *supra* note 52, at 77-78.

226. H.R. 6161, 95th Cong., 1st Sess. § 105 (1977).

227. *Id.* The House intended this to be a narrow loophole. H.R. REP. NO. 294, *supra* note 52, at 76-77.

228. Although the NCP was predicated on the costs of compliance, the House Re-

Having successfully won over the House conferees in 1976, the Senate in 1977 did little more than extend the final deadline for DCO's from January 1, 1979, to July 1, 1979.²²⁹ The NCP provisions were likewise retained, except for date changes reflecting the change in the DCO deadline.²³⁰

The 1977 Amendments basically returned to the Senate version that had prevailed the year before. The state is to be the primary issuer of DCO's, although the Administrator may issue them after giving notice to the states.²³¹ Individual sources are not required to apply in order to trigger the DCO mechanism. The House did give the Administrator a greater role in the DCO process than would have been allowed by the proposed 1976 Amendments. The Administrator now has a substantive review role for state-issued DCO's to major stationary sources, and only a procedural review role for DCO's issued to all other sources.²³² The requirement of interim emission standards designed to force compliance as expeditiously as practicable is retained. These interim standards must include measures designed to avoid substantial endangerment of the public health. In addition, the Amendments require utilization of best practicable control systems for DCO-issued sources.²³³ The final compliance date for all DCO's is July 1, 1979, or three years after the date for final compliance specified in the plan, whichever is later.²³⁴ Finally, the DCO

port indicated that the penalty could exceed the equivalent of the costs of compliance. H.R. REP. NO. 294, *supra* note 52, at 77-78.

229. S. 252, 95th Cong., 1st Sess. § 11(a) (1977). *See generally* S. REP. NO. 127, *supra* note 5, at 43-48.

230. S. 252, 95th Cong., 1st Sess. § 11(b) (1977). All sources receiving a DCO allowing compliance later than July 1, 1978, had to furnish the state with the information needed to determine the NCP no later than Oct. 1, 1977.

231. Clean Air Act Amendments of 1977, § 112, 42 U.S.C.A. § 7413(d)(1) (West Supp. 1977).

232. *Compare* H.R. 10498, 94th Cong., 2d Sess. § 103 (1976) with Clean Air Act Amendments of 1977, § 112, 42 U.S.C.A. § 7413(d)(2) (West Supp. 1977).

233. Clean Air Act Amendments of 1977, § 112(a), 42 U.S.C.A. § 7413(d)(6), (7) (West Supp. 1977).

234. *Id.* § 7413(d)(1)(D). Apparently under pressure from Louisville Gas & Electric, the recipient of an "illegal" § 113(a) compliance order, the July 1, 1979, deadline was eliminated for that particular source. *Id.* *See* 123 CONG. REC. 59,435 (daily ed. June 10, 1977) (amendment of Sen. Huddleston). Other recipients of § 113(a) orders or consent decrees extending beyond July 1, 1979, were deemed to be "valid" unless modified within one year of the enactment of the 1977 Amendments. Clean Air Act Amendments of 1977, § 112(a), 42 U.S.C.A. § 7413(d)(12) (West Supp. 1977).

for major stationary sources must contain a provision for the payment of the NCP if compliance is not achieved by July 1, 1979.

The NCP provisions, on the other hand, represent a more equitable compromise between the House and Senate proposals.²³⁵ The Administrator, within six months, must promulgate regulations requiring the assessment and collection of NCP's against covered sources. States can assume primary responsibility for NCP's only after submitting, for approval by the Administrator, a plan for levying and collection. Yet even with an approved state plan the Administrator can still levy and collect NCP's in the absence of proper state action. These provisions reflect the House's greater reluctance to shift major decisionmaking authority to the states.²³⁶

NCP's are to be assessed against any major source not in compliance with an applicable implementation plan or agreement, any source not in compliance with a NSPS or hazardous emission standard, or any source receiving a DCO or PNSO that is not in compliance with an interim emission standard.²³⁷ Exceptions from the application of the NCP mechanism were created for sources operating under CCE's or FEA orders to convert to coal, for sources given ITW's or TES's, and for sources that are unable to comply due to circumstances beyond their control. These exceptions will cease if the source fails to comply with any applicable interim emission standards.

The 1977 Amendments retain the House and Senate requirement that NCP's can be assessed and collected only after an adjudicatory hearing. The assessment of the NCP is to eliminate only the economic advantages of non-compliance.²³⁸ The 1977 Amendments retain certain provisions from the House bill that tend to unnecessarily complicate the NCP assessment process. The 1977 House bill had neatly divided the NCP process into two periods. First, it provided that no NCP's would be imposed until two years after the enactment date of the Amendments, thus giving the sources a "grace period" in

235. See, e.g., H.R. REP. NO. 564, *supra* note 52, at 138-40.

236. *Id.* at 140. See also Clean Air Act Amendments of 1977, § 118, 42 U.S.C.A. §§ 7420(a)(1), 7420(b)(2)(B) (West Supp. 1977).

237. Clean Air Act Amendments of 1977, § 118, 42 U.S.C.A. § 7420(a)(2)(A) (West Supp. 1977). This approach is similar to that proposed in the 1977 House bill. See H.R. 6161, 95th Cong., 1st Sess. § 105 (1977).

238. H.R. REP. NO. 564, *supra* note 52, at 140.

which to comply voluntarily.²³⁹ Then, for all sources given non-compliance notices more than two years after the date of enactment, the NCP would be effective immediately.²⁴⁰ The 1977 Amendments retain the two-year grace period, measured from the date of enactment, but inexplicably set July 1, 1979, as the date upon which immediately effective NCP's are to begin.²⁴¹ Because the Amendments became effective on August 7, 1977, there is a six-week overlap in which both provisions are applicable. The Conference Committee sheds no light on why the change was made.²⁴² To avoid unnecessary litigation, the Administrator may choose to delay all matters of non-compliance to August 8, 1979, a six-week delay beyond the formal date for compliance under the DCO procedure. The 1977 Amendments also retain the House version's two-year delay in collecting NCP's with a mandatory settlement proceeding at the termination of the payments.²⁴³ The Amendments deal with the problem of not-yet-promulgated emission limitations by adopting the Senate language requiring the imposition of NCP's for all sources not in compliance with the emission limitations within three years after enactment of such limitations.²⁴⁴ The Amendments also tie in the limited judicial review mandate by requiring that any lawsuit attacking a NCP regulation be filed within sixty days, thereby shielding the regulation from subsequent attack in later civil or criminal proceedings.²⁴⁵

239. H.R. 6161, 95th Cong., 1st Sess. § 105 (1977). See H.R. REP. NO. 294, *supra* note 52, at 77.

240. H.R. 6161, 95th Cong., 1st Sess. § 105 (1977).

241. Compare Clean Air Act Amendments of 1977, § 118, 42 U.S.C.A. § 7420(d)(3)(C) (West Supp. 1977) with H.R. 6161, 95th Cong., 1st Sess. § 105 (1977). This provision reads:

(C) For the purpose of this section, the term 'period of covered noncompliance' means the period which begins - (i) two years after the date of enactment of this section, in the case of a source for which notice of noncompliance under subsection (b)(3) is issued on or before the date two years after such date of enactment, or
(ii) on the date of issuance of the notice of noncompliance under subsection (b)(3), in the case of a source for which such notice is issued after July 1, 1979

42 U.S.C.A. § 7420(d)(3)(C) (West Supp. 1977).

242. H.R. REP. NO. 564, *supra* note 52, at 133-34.

243. Clean Air Act Amendments of 1977, § 118, 42 U.S.C.A. § 7420(d) (West Supp. 1977).

244. *Id.* § 7420(g).

245. *Id.* § 7420(e).

f. *Specialized Delayed Compliance Orders*

In addition to the DCO, the 1977 Amendments authorize issuance of Specialized Delayed Compliance Orders (SDCO) in situations where the source is making certain fundamental changes in its operation.²⁴⁶ A SDCO relieves the source of its obligation to meet interim emission standards, but requires it to post a bond or other surety equalling the cost of actual compliance plus any economic advantages that would have accrued because of non-compliance.²⁴⁷ Failure to achieve final compliance by July 1, 1979, will result in forfeiture of the bond or surety.²⁴⁸ SDCO's may be issued only where the source intends to achieve compliance with the applicable implementation plan by replacing the facility, completely changing the emission-causing production process, or terminating the generation.²⁴⁹

The SDCO concept was exclusively a Senate proposal in both 1976²⁵⁰ and 1977. The 1976 Conference Committee accepted the Senate approach to SDCO's without change.²⁵¹ The legislative history reflects the fact that these SDCO's were to be a narrow loophole requiring fundamental changes in the operation of the source before it could be freed from the interim emission standard requirement.²⁵² In 1977 the Senate retained its 1976 SDCO process intact.²⁵³ Thus, the 1977 Amendments as enacted restored the SDCO process originally contained in the 1976 Senate bill with only an amendment that changed the final compliance date to July 1, 1979.²⁵⁴

246. *Id.* § 7413(d)(3).

247. *Id.*

248. *Id.*

249. *Id.*

250. S. 3219, 94th Cong., 2d Sess. § 9(a) (1976) as reported in S. REP. NO. 717, *supra* note 47, at 169.

251. S. 3219, 94th Cong., 2d Sess. § 111 (1977) as reported in H.R. REP. NO. 1742, *supra* note 90, at 14.

252. S. REP. NO. 717, *supra* note 47, at 36.

253. S. 252, 95th Cong., 1st Sess. § 11(a) (1977). See also S. REP. NO. 127, *supra* note 5, at 46.

254. Compare Clean Air Act Amendments of 1977, § 112(a), 42 U.S.C.A. § 7413 (West Supp. 1977) with S. 3219, 94th Cong., 2d Sess. § 9(a) (1977) as reported in S. REP. NO. 717, *supra* note 47, at 169.

III. JUDICIAL REVIEW

A. *The Legislative Mandate*

It was clear from the legislative history of the 1970 Amendments that Congress was frustrated with both administrative and judicial delays in the enforcement and implementation of previous air pollution legislation.²⁵⁵ This frustration resulted in the enactment of section 307 of the 1970 Amendments,²⁵⁶ an attempt to expedite the judicial review process to avoid unnecessary delays in attaining the statute's goals. Congressional statements evinced a concern that the attainment of NPAAQS within a three-year period would be impossible without some means of shortening the judicial review process and foreclosing individual attacks on implementation plans that might force reformulation of the state implementation plan under attack.²⁵⁷ The limitation of judicial review could not insure the attainment of NPAAQS within three years, but without it chances of attainment were extremely limited.

As originally enacted, section 307 called for the review of the Administrator's decision regarding any SIP in the United States Court

255. For an excellent review of the legislative history of the judicial review sections of the 1970 Amendments, see Luneburg & Roselle, *Judicial Review under the Clean Air Act Amendments of 1970*, 15 B.C. IND. & COM. L. REV. 667 (1974). See also Kramer II, *supra* note 6, at 197-99. But see Currie, *Judicial Review Under Federal Pollution Laws*, 62 IOWA L. REV. 1221, 1254-61 (1977).

256. Clean Air Act of 1970, § 307, 42 U.S.C. § 1857h-5(b). Section 307 provided in part:

(b)(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard under section 1857c-7 of this title, any standard of performance under section 1857c-6 of this title, any standard under section 1857f-1 of this title (other than a standard required to be prescribed under section 1857f-1(b)(1) of this title), and determination under section 1857f-1(b)(5) of this title, any control or prohibition under section 1857f-6c of this title, or any standard under section 1857f-9 of this title may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 1857c-5 of this title or section 1857c-6(d) of this title may be filed only in the United States Court of Appeals for the appropriate circuit. Any such petition shall be filed within 30 days from the date of such promulgation or approval, or after such date if such petition is based solely on grounds arising after such 30th day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement.

257. See, e.g., S. REP. NO. 1196, *supra* note 8, at 21, 23, 41. See generally Luneburg & Roselle, *supra* note 255, at 675-79.

of Appeals for the appropriate circuit.²⁵⁸ Lawsuits challenging NPAAQS, NSPS, or hazardous emission standards had to be filed in the United States Court of Appeals for the District of Columbia within thirty days of the Administrator's action. Judicial review of such action in civil or criminal proceedings beyond the thirty-day period was precluded²⁵⁹ unless the grounds for appeal arose after the thirty-day period had expired.²⁶⁰

In 1976 only the House sought to modify section 307, proposing merely to extend the filing period from thirty to sixty days.²⁶¹ The 1977 House Report reemphasized the intent of Congress to restrict review to the sixty-day period, concluding that the limitation provided for a "legally adequate opportunity for judicial review."²⁶² As finally enacted in the 1977 Amendments, this extension of the limitation period was the only change in section 307.²⁶³

Thus, Congress sought to retain intact the device created in 1970—the imposition of a short limitations period to condense the litigation into the shortest constitutionally permissible period. In so doing, the Congress left many questions unanswered regarding the operation and validity of the section 307 review process, which had not yet been before the Supreme Court.

B. *Section 307 in the Courts*

In seeking to interpret section 307 prior to *Union Electric*, several circuits went different directions in attempting to circumvent the clear congressional goal of limiting the ability of litigants to raise feasibility claims.²⁶⁴ Many observers saw *Union Electric* as an opportu-

258. Clean Air Act of 1970, § 307, 42 U.S.C. § 1857h-5(b) (1970) (currently codified at 42 U.S.C.A. § 7607 (West Supp. 1977)).

259. Clean Air Act of 1970, § 307, 42 U.S.C. § 1857h-5(b)(2) (1970) (amended 1977). This provision was borrowed from the Emergency Price Control Act of 1942, 50 U.S.C. § 902 (1942).

260. Clean Air Act of 1970, § 307, 42 U.S.C. § 1857h-5(b)(1) (1970) (amended 1977).

261. Compare H.R. 10498, 94th Cong., 2d Sess. § 305 (1976) with S. 3219, 94th Cong., 2d Sess. (1976) as reported in H.R. REP. NO. 1742, *supra* note 90, at 68. See also H.R. REP. NO. 1175, *supra* note 47, at 263; H.R. REP. NO. 1742, *supra* note 90, at 124-25.

262. H.R. REP. NO. 294, *supra* note 52, at 322.

263. Clean Air Act Amendments of 1977, § 305, 42 U.S.C.A. § 7601(b)(1) (West Supp. 1977) (amending 42 U.S.C. § 1857h-5(b)(1) (1970)).

264. For a general discussion, see Kramer II, *supra* note 6, at 194-202. See also Currie, *supra* note 255, at 1254-60.

nity to answer some of the difficult constitutional and statutory issues raised by this sharp limitation on judicial review. In the case, petitioner Union Electric Company had sought to attack, after the thirty-day period, certain provisions of the Missouri SIP.²⁶⁵ The Supreme Court focused only indirectly on the judicial review provisions of section 307, emphasizing instead the scope of the Administrator's power to approve or disapprove SIP's under section 110.²⁶⁶ The Supreme Court merely concluded that feasibility issues were not among the factors to be considered by the Administrator in reviewing a submitted SIP under section 110. That being so, there was no jurisdiction in the Court of Appeals to hear those issues in post-thirty-day litigation.²⁶⁷ Because the constitutionality of section 307 was not at issue in *Union Electric*, the Supreme Court specifically declined to decide whether violators of an SIP could raise economic or technological infeasibility as a defense to civil or criminal enforcement proceedings.²⁶⁸

In section 307 decisions subsequent to *Union Electric*, the Courts of Appeals have taken other approaches to the problem. In *Lloyd A. Fry Roofing Co. v. EPA*,²⁶⁹ petitioner attacked an EPA-issued abatement order and questioned the underlying constitutionality of the state regulation alleged to have been violated.²⁷⁰ The court of appeals affirmed the district court's dismissal of petitioner's constitutional claim that the regulation was unenforceable. The Eighth Circuit concluded that the attack on the validity of the SIP provisions was "presented out of time and in the wrong forum."²⁷¹ The court reaf-

265. *Union Elec. Co. v. EPA*, 515 F.2d 206 (8th Cir. 1975), *aff'd*, 427 U.S. 246 (1976).

266. *Union Elec. Co. v. EPA*, 427 U.S. 246, 257-66 (1976). See Clean Air Act of 1970, § 110, 42 U.S.C. § 1857c-5(a)(2) (1970) (currently codified at 42 U.S.C.A. § 7410(a)(2) (West Supp. 1977)).

267. *Union Elec. Co. v. EPA*, 427 U.S. 246, 265-66 (1976). The Eighth Circuit dismissed the action for lack of jurisdiction. 515 F.2d 206, 216 (8th Cir. 1975). The Supreme Court merely affirmed the dismissal, although the Court's opinion intimates a conclusion on the merits that feasibility challenges must fail in § 307 proceedings. The Court did not tackle the problem as to when and where a polluter may be entitled to raise feasibility issues. See Kramer II, *supra* note 6, at 199-201.

268. *Union Elec. Co. v. EPA*, 427 U.S. 246, 268 n.18 (1976). The Court, in a later footnote, declined to answer a question raised by Union Electric whether polluters have a due process right to raise feasibility issues in a § 307(b)(1) proceeding if they show that review of those issues is not available elsewhere. *Id.* at 269 n.19.

269. 554 F.2d 885 (8th Cir. 1977).

270. *Id.* at 885-87, 892.

271. *Id.* at 892.

firmed the statutory time limit, which was “designed to get issues resolved promptly and thereby prevent delay in cleaning the air.”²⁷²

However, in *United States v. Interlake*²⁷³ the United States sought injunctive relief to prohibit Interlake from operating a Chicago by-product coke facility in violation of certain SIP provisions.²⁷⁴ The defendant argued that the emission standard alleged to have been violated was vague and therefore a violation of due process. The United States argued that the rule should have been challenged in a section 307 proceeding, and since the thirty-day period had elapsed those issues could not be raised.²⁷⁵ The court concluded, citing *Union Electric*, that because feasibility claims could not be heard in the original proceeding they could not be barred in any later criminal or civil enforcement proceeding.²⁷⁶ The result opens a Pandora’s box of individual infeasibility claims and delayed attacks on the SIP that Congress had deemed inconsistent with its technology-forcing strategy.²⁷⁷

Finally, in *Adamo Wrecking Co. v. United States*,²⁷⁸ the United States Supreme Court was faced with a direct attack on the validity of section 307 and its preclusion of judicial review in subsequent criminal or civil enforcement proceedings. Petitioner had been indicted for violation of the hazardous emission standard for asbestos.²⁷⁹ Under section 112 the Administrator was authorized to promulgate hazardous emission standards for designated pollutants. In the case of friable asbestos emissions caused by the demolition of buildings, the Administrator had promulgated a “work practice standard” requiring the demolition crew to water down the building prior to demolition. Petitioner was individually notified of the wetting requirement but chose to ignore the notice. The United States then sought to establish criminal liability under section 113(c)(1)(C) for a

272. *Id.* at 893, citing *Granite City Steel Co. v. EPA*, 501 F.2d 925, 926 (7th Cir. 1974).

273. 429 F. Supp. 193 (N.D. Ill. 1977).

274. *Id.* at 195.

275. *Id.* at 197.

276. *Id.* at 197-98. The court cited *Indiana and Michigan Elec. Co. v. EPA*, 509 F.2d 839, 845-47 (7th Cir. 1975), a pre-*Union Electric* case, to support its finding that feasibility and constitutional issues can be raised in later enforcement actions because they are not part of the Administrator’s original decision to approve an SIP.

277. See H.R. REP. NO. 1175, *supra* note 47, at 51.

278. 98 S. Ct. 566 (1978).

279. *Id.* at 569-70. See Clean Air Act of 1970, § 112, 42 U.S.C. § 1857c-7(c)(1)(B) (1970) (currently codified at 42 U.S.C.A. § 7412(c)(1)(B) (West Supp. 1977)).

knowing violation of a hazardous emission standard.²⁸⁰ The position of the United States, which had been supported in the Sixth Circuit,²⁸¹ was that section 307(b) precluded putting the validity of a hazardous emission standard at issue in a subsequent criminal proceeding beyond the thirty-day time period.²⁸² The petitioner argued that, while section 307 did preclude the reviewing of an emission standard in a subsequent criminal proceeding, the defendant could still claim that the so-called emission standard was not an emission standard, and thus beyond the authority of the Administrator to issue.

Justice Rehnquist, writing for a five-man majority, held that the district court could determine whether the underlying hazardous emission standard was in reality a standard. Rehnquist saw the basic purposes of section 307(b)(2) as two-fold in nature: first, to insure that the substantive provisions of the standard would be uniformly applied and interpreted, and second, to insure that the circumstances of its adoption would be quickly reviewed by a single court.²⁸³

While carefully avoiding the constitutional issues implicit in limiting judicial review, the majority felt the complexity of the 1970 Amendments militated against repudiating review in all situations in which criminal penalties could be imposed.²⁸⁴ The Court was partic-

280. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 570 (1978). See Clean Air Act of 1970, § 113, 42 U.S.C. § 1857c-8(c)(1)(C) (1970) (currently codified at 42 U.S.C.A. § 7413(c)(1)(C) (West Supp. 1977)).

281. *United States v. Adamo Wrecking Co.*, 545 F.2d 1 (6th Cir. 1976).

282. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 569-70 (1978). In fact, a petition for review of the "work practice standard" was filed, under § 307, in the Court of Appeals for the District of Columbia. Since the suit was filed beyond the thirty-day period, the court dismissed the action without any decision on the merits. *Dore Wrecking Co. v. Fri*, No. 73-1686 (U.S. App. D.C., filed Aug. 1, 1973).

283. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 572 (1978).

Justice Stewart, in a dissenting opinion joined by Justices Brennan and Blackmun, thought that the primary congressional purpose in enacting § 307(b)(2) was to create a unified and expedited judicial review procedure, one which he sees as being destroyed by the majority's approach. *Id.* at 576-77 (Stewart, J., dissenting). The Court seemingly ignores its previous statements endorsing the congressional mandate imposing a technology-forcing strategy. As Justice Stewart points out, the result of the majority's interpretation is clearly antithetical to the intent to "maintain the integrity of the time sequences provided through the Act." *Id.*, citing S. REP. No. 1196, 91st Cong., 2d Sess. 41 (1970).

284. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 569-70 (1978). The Sixth Circuit, in upholding the position of the United States, relied heavily on *Yakus v. United States*, 321 U.S. 414 (1944), where the Supreme Court had upheld limitations placed on judicial review under the Emergency Price Control Act. *United States v. Adamo Wrecking Co.*, 545 F.2d 1, 9-10 (6th Cir. 1976). See note 259 *supra*

ularly impressed with the fact that the 1970 Amendments imposed criminal penalties only upon a specific class of violators involved in extremely hazardous or willful activities. The Court adduced from this congressional scheme a decision to penalize more harshly the violators of "emission standards" as opposed to other Administrator-promulgated rules.²⁸⁵ From that finding the Court inferred an intent to specifically and narrowly define "emission standards" and not let the Administrator define them through personal fiat.²⁸⁶ The Court felt that the decision, in light of its carefully proscribed limits, would not do violence to the overall congressional scheme.²⁸⁷

In instructing the district court as to its role in defining an "emission standard" in a criminal proceeding, the Court severely restricted the scope of a trial court's inquiry. The district court cannot, under the guise of defining a regulation as an emission standard, engage in a sweeping judicial review of the underlying regulation.²⁸⁸ The sole avenue of inquiry for the court to follow is whether the standard forming the basis of the violation is an "emission standard" within the broad congressional meaning of that term.²⁸⁹ There is to be no determination as to the rationality of the regulation, whether the activity was supported by the record or is otherwise arbitrary, or even whether the Administrator met the procedural requirements in promulgating the regulation in question.

After overcoming the section 307(b) prohibition, the Court then decided the merits, with dissent by Justice Stevens, that the particular regulation violated was a work practice standard and not an emission

Justice Powell, in his concurring opinion, also reserved decision on the constitutionality of § 307 while hinting that he sees an important distinction between *Yakus* and *Adamo Wrecking*. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 575-76 (1978) (Powell, J., concurring).

285. *Id.* at 572. One of the reasons given for this deduction was a lack of notice, even though the defendant had been notified of the wetting requirement prior to the demolition of the building. Since there had been notice and a subsequent promise to comply, defendant committed a knowing violation of the regulation. *Id.* at 579 n.12 (Stevens, J., dissenting).

286. *Id.* at 572. The Court further stated that where there is an "ambiguity in a criminal statute, doubts are resolved in favor of the defendant." *Id.* at 572-73, citing *United States v. Bass*, 401 U.S. 336, 348 (1971).

287. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 573 (1978). Justice Stewart argued that other determinations, such as the designation of a substance as a "hazardous pollutant," might also fall under the majority's holding, thus destroying the very purpose of § 307. *Id.* at 576-77 (Stewart, J., dissenting).

288. *Id.* at 573.

289. *Id.*

standard as defined under section 112. The indictment fell, since there was no violation of a regulation under section 112 and therefore no criminal liability under section 113.²⁹⁰

This five-four decision is another major blow at the technology-forcing strategy. However, because the Court did not strike down the limitation contained in section 307 on constitutional grounds, and because it carefully limited the exception it recognized, the blow is probably not fatal.²⁹¹ In fact, the major issues left unresolved by *Union Electric* remain unanswered. *Adamo Wrecking* stands for the proposition that, under a limited set of circumstances, a criminal defendant may question whether the regulation forming the subject matter of his indictment is in fact an emission standard capable of triggering criminal enforcement proceedings. *Adamo Wrecking* does not deal with *civil* enforcement proceedings, and arguably one may infer from the Court's emphasis on the unique and special nature of the criminal liability provision of the 1970 Amendments that such a review in civil enforcement proceedings is indeed precluded. Clearly, *Adamo Wrecking* does not permit feasibility issues to be raised as defenses in enforcement proceedings. Such a result would have dealt a final blow to the remnants of the technology-forcing strategy.

IV. CONCLUSION

Justice Powell was particularly prescient when he predicted Congress would strike a new balance given the alternative of major utility shutdowns. Yet, the 1977 Amendments reflect more a mid-course correction for the technology-forcing strategy initially mandated in 1970 than a total rejection. The extension of the attainment date to 1982 and beyond clearly removes any immediate pressure on polluters to develop new and cleaner technologies. The addition of numerous new extension and waiver provisions also weakens the technology-forcing strategy and gives greater discretion to state and federal officials than had been previously authorized. The shutdown alternative, once seen as a viable option, has been weakened but not totally eliminated. In its place are monetary penalties designed to eliminate the competitive advantages gained by fighting the system rather than controlling emissions. Notwithstanding a lengthy judicial struggle with the concept of shutdown and future opportunities for judicial delay, even in the face of strong language from the Supreme

290. *Id.* at 573-75.

291. *See* note 284 *supra*.

Court, congressional action in 1977 may have not been as debilitating as initially thought. The 1977 Amendments retained health-based ambient air quality standards, which came under attack for the first time at the legislative level. The 1977 Amendments also reemphasized the congressional intent to protect the public health even if it entails great expense or the possibility of shutdowns. Thus, while a new balance was struck, the overall commitment to protecting the public health has not been greatly weakened.

Finally, the United States Supreme Court seems to forget its prior recognition of the technology-forcing strategy, at least in a criminal enforcement setting. By virtue of *Train* and *Union Electric* the Supreme Court embraced the congressional mandate to utilize the technology-forcing strategy in order to maximize protection of the public health. In *Adamo Wrecking*, however, Justice Rehnquist, without referring to either *Train* or *Union Electric*,²⁹² engages in an attenuated reading of legislative history to conclude that a defendant has the right to question the authority of the Administrator to promulgate a regulation under which the enforcement proceeding is brought. This is a critical flaw in the Court's analysis that, if expanded, might cause the demise of the technology-forcing strategy.

The 1977 Amendments and *Adamo Wrecking* compromise the technology-forcing strategy with an approach that may be more palatable for courts, emitters, and implementers to accept. Yet no certainty exists that the compromise will encourage industrial compliance rather than opposition, even though the shutdown alternative has been practically eliminated.

292. *Train* is cited in a footnote without reference to the technology-forcing strategy. *Adamo Wrecking Co. v. United States*, 98 S. Ct. 566, 573 n.5 (1978).

