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The Clean Air Act Amendments of 1977 represent the first major revisions and adjustments of the Clean Air Act since 1970. In this article, the authors examine the changes brought about by the 1977 Amendments, particularly in the prevention of significant deterioration of air quality and the new source performance standards in combination with the requirement for the utilization of locally available coal.

THE CLEAN AIR ACT AMENDMENTS OF 1977: A SELECTIVE LEGISLATIVE ANALYSIS

*W. Perry Pendley**

*J. Michael Morgan***

INTRODUCTION

Shortly before midnight on Thursday, August 4, 1977, Senator Jake Garn emerged smiling from the Republican cloakroom onto the floor of the United States Senate. Senator Edmund Muskie, Chairman of the Subcommittee on Environmental Pollution of the Senate Environment and Public Works Committee, stood nearby smiling and warmly greeted Senator Garn, the man who nearly a year before had been instrumental in the defeat of Senator Muskie's Clean Air Bill. A few minutes later the Conference Report on H.R. 6161, the Clean Air Act Amendments of 1977, was called up and passed by a voice vote. In a short time, the Senate adjourned.

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The views expressed herein are those of the authors. They do not necessarily represent the views of Senators Hansen or Wallop or the House Subcommittee on Mines and Mining.

The galleries had been nearly empty. The press had few representatives watching down from above the Vice President's chair. Only a handful of Senators were on the floor.

Yet the moment was momentous. The smile on the face of Senator Garn and the greeting he exchanged with Senator Muskie indicated that the Clean Air Act Amendments of 1977 would at last become law.¹

The amendments adopted by the Congress represent the first major revisions and adjustments of the Clean Air Act in seven years.² The Congress, aware of the conflicts between energy and the environment and aware too of the serious dangers posed by air pollution, enacted a massive revision of the Act giving the nation new concepts with which to deal and new goals to be achieved.

It is the authors' intent to examine and discuss these changes with particular attention to the Prevention of Significant Deterioration with its corollary, the protection of visibility, and new source performance standards in combination with the requirement for the utilization of locally available fuels.

While much attention—both in Congress and in the press—was focused upon mobile sources, it is not the authors' intention to discuss the mobile source issues except as they may

1. In June of 1975, the Subcommittee on Environment Pollution of the Senate Public Works Committee (predecessor to the Senate Environment and Public Works Committee) began consideration of amendments to the Clean Air Act. In November 1975, a bill was reported to the full committee which completed action and reported amendments to the Senate in February of 1976. The Senate passed the amendments to the Clean Air Act of August 5, 1976.

The Subcommittee on Health and the Environment of the House of Representatives' Committee on Interstate and Foreign Commerce began consideration of various legislative proposals amending the Clean Air Act in March 1975, and reported a bill to the full Committee in late October. The Commerce Committee began consideration of the amendments in January 1976, reporting the bill to the House in mid-March. On September 16, 1976, the House adopted the Clean Air Act amendments.

A Conference Committee, made up of members of the Senate and the House, met to resolve differences in the two measures. On September 30, the Conference agreed to a final bill. However, the necessary approval of the Conference agreement was prevented in the Senate by a filibuster conducted by a number of Senators who indicated that insufficient consideration had been given to the question of the prevention of significant deterioration and that the final bill as agreed to by the Conference Committee had not as yet been printed. S. REP. NO. 127, 95th Cong., 1st Sess. 19 (1977); H.R. REP. NO. 294, 95th Cong., 1st Sess. 30 (1977). 122 CONG. REC. S17339-17342, S17529-17557, S17561-17568, S17571-17573 (1976).

2. The Clean Air Act includes the Clean Air Act of 1963, amendments made by the Motor Vehicle Air Pollution Control Act of 1965, the Clean Air Act Amendments of 1966, the Air Quality Act of 1967, the Clean Air Amendments of 1970, the Comprehensive Health Manpower Training Act of 1971 and the Energy Supply and Environmental Coordination Act of 1974.

relate to the concept of the Prevention of Significant Deterioration.

THE PREVENTION OF SIGNIFICANT DETERIORATION AND VISIBILITY: NEW STANDARDS?

While perfect hindsight enables us to trace the Prevention of Significant Deterioration (PSD) requirements back a decade, the passage of the Clean Air Act Amendments of 1977 marks the first time Congress has explicitly set forth a PSD scheme. It ends a five year controversy over both the existence and parameters of the policy,³ but poses new questions which may be only slightly less controversial. Arguably, it represents a reversal of the textbook approach to regulatory development, by codifying a legislative scheme which was initiated by the courts and developed through rulemaking.

For ten years, the policy of significant deterioration of air quality has been based on a single phrase of Congressional policy, and little more than a scintilla of legislative history. That phrase, to "protect and enhance the quality of the Nation's air resources" was first included as a stated purpose in the Air Quality Act of 1967.⁴

Yet the Act provided no further guidance as to if, or how the "protect and enhance" language was to be translated into a regulatory scheme to prevent significant deterioration of air quality. Guidelines issued pursuant to the Act by the Department of Health, Education and Welfare's National Air Pollution Control Administration in 1969 included a PSD requirement.⁵ The Guidelines provided that "Air Quality Standards which, even if fully implemented, would result in significant

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3. The controversy is generally thought of as arising with the case of *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D.D.C. 1972) [hereinafter cited as *Sierra Club v. Ruckelshaus*], in which the order was filed on May 30, 1972.
 4. Pub. L. No. 90-148, 81 Stat. 485 (1967). While this Act first hinted at a policy of PSD for air quality, it is generally conceded that Guidelines published by the Federal Water Pollution Control Administration in May 1966 contained the first enunciation of non-degradation requirements in federal pollution control law. One Guideline stated, "In no case will standards providing for less than existing water quality be acceptable." Another required that proposed water quality standards provide for "the maintenance and protection of quality and use or uses of water now of a higher quality on or a quality suitable for present and potential uses." See U.S. DEPT. OF INTERIOR FEDERAL WATER POLLUTION CONTROL ADMINISTRATION, GUIDELINES FOR ESTABLISHING WATER QUALITY STANDARDS FOR INTERSTATE WATER 5-7 (1969).
 5. NATIONAL AIR POLLUTION CONTROL ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, GUIDELINES FOR THE DEVELOPMENT OF AIR QUALITY STANDARDS AND IMPLEMENTATION PLANS (1969).

deterioration in air quality in any substantial portions of an air quality region clearly would conflict with the express purpose of the law.”⁶

While the “protect and enhance” language was not altered in the 1970 Clean Air Act Amendments,⁷ neither were PSD requirements further developed. The only additional guidance was provided by brief statements in the House and Senate Reports which accompanied the Amendments.⁸ In fact, it could be argued that new provisions requiring that emissions from all new or modified sources meet national performance standards, eliminated the need for additional PSD requirements.

However, the Administration and its successor, the Environmental Protection Agency,⁹ consistently upheld their interpretation of PSD requirements through mid-1971. They did so in hearings before both Houses of Congress,¹⁰ and in conjunction with the issuance of national primary and secondary ambient air quality standards in April of 1971.¹¹

6. *Id.* at § 1.51 of Part I.

7. 42 U.S.C. § 1857(b)(1) (1970), Clean Air Act § 101(b)(1).

8. The Senate Report which accompanied the 1970 Amendments stated:
In areas where current air pollution levels are already equal to, or better than, the air quality goals, the Secretary should not approve any implementation plan which does not provide, to the maximum extent practicable, for the continued maintenance of such ambient air quality. Once such national goals are established, deterioration of air quality should not be permitted except under circumstances where there is no available alternative. Given the various alternative means of preventing and controlling air pollution—including the use of the best available control technology industrial process and operating process—and care in the selection of sites for new sources, land use planning and traffic controls—deterioration need not occur.

S. REP. NO. 1146, 91st Cong., 2d Sess. 11 (1970).

The House Report stated:

[E]ffective pollution control requires both reduction of present pollution and prevention of new significant pollution problems.

H.R. REP. NO. 1146, 91st Cong., 2d Sess. 5 (1970).

9. The EPA took over the management of a pollution control program on December 2, 1970, as directed by Reorg. Plan No. 3 of 1970, § 2(a)(3), 35 Fed. Reg. 15623, 84 Stat. 2086.

10. In his statement which was read before committees of both the House and Senate, Secretary Finch stated:

As you know, one of the express purposes of the Clean Air Act is “to protect and enhance the quality of the Nation’s air resources.” Accordingly, it has been and will continue to be our view that implementation plans that would permit significant deterioration of air quality in any area would be in conflict with this provision. We shall continue to expect states to maintain air of good quality where it now exists.

Hearings on Air Pollution before the Subcomm. on Air and Water Pollution of the Senate Public Works Comm., 91st Cong., 2d Sess. 132-133 (1970); *Hearing on Air Pollution Control and Solid Waste Recycling before the Subcom. on Public Health and Welfare of the House Interstate and Foreign Commerce Comm.*, 91st Cong., 2d Sess. 297 (1970).

11. The regulations provided that:

The promulgation of national primary and secondary air quality stan-

Guidelines initially proposed in 1971 to assist states in developing implementation plans, continued to require the prevention of significant deterioration. However, the Administration deleted PSD requirements from the guidelines when promulgated in August of that year.¹²

As a result of this omission, the Sierra Club and other environmental groups filed a citizens suit on May 24, 1972 seeking to enjoin the Administrator from approving state implementation plans which did not provide for the prevention of the significant deterioration of air quality. In *Sierra Club v. Ruckelshaus*¹³ the District Court for the District of Columbia agreed with the Sierra Club's interpretation of the Act as requiring PSD, required EPA to prepare regulations adequate to prevent significant deterioration, and enjoined the Administrator.¹⁴ The courts interpretation was upheld on appeal.¹⁵

dards shall not be considered in any manner to allow significant deterioration of existing air quality in any portion of any state.

40 C.F.R. § 50.2(c) (1972).

12. The guideline in question stated:

In any region where measured or estimated ambient levels of a pollutant are below the levels specified by an applicable secondary standard the state implementation plan shall set forth a control strategy which shall be adequate to prevent such ambient pollution levels from exceeding such secondary standard.

40 C.F.R. § 51.12(b) (1972).

13. *Sierra Club v. Ruckelshaus*, *supra* note 3.

14. The injunction was issued on May 30, 1972, only six days after the action was filed. It is reprinted in full in *Hearings on the Nondegradation Policy of the Clean Air Act before the Subcommittee on Air and Water Pollution of the Senate Comm. on Public Works*, 93d Cong., 1st Sess. 4-5 (1973). The court held that:

Having considered the stated purpose of the Clean Air Act of 1970, the legislative history of the Act and its predecessor, and the past and present administrative interpretation of the Acts, it is our judgment that the Clean Air Act of 1970 is based in important part on a policy of nondegradation of existing clean air and the 40 C.F.R. 51.12(b), in permitting the states to submit plans which allow pollution levels of clean air to rise to the secondary standard level of pollution, is contrary to the legislative policy of the Act.

Sierra Club v. Ruckelshaus, *supra* note 3, at 256. For a detailed account of the background of this case and the issues raised by the litigation see: Note, *The Clean Air Act and the Concept of Non-Degradation: Sierra Club v. Ruckelshaus*, 2 *ECOLOGICAL L.Q.* (1972). A more critical examination is provided in Hines, *A Decade of Non-Degradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water*, 62 *IOWA L. REV.* 643, 665 (1977).

15. A panel of the Court of Appeals for The District of Columbia Circuit affirmed the District Court order per curiam, *Sierra Club v. Ruckelshaus*, D.C. Cir. No. 72-1528 (Nov. 1, 1972). An appeal was taken to the Supreme Court, which granted certiorari, staying the District Court order. 4 *ERC* 1815 (D.C. Cir. 1972). An equally divided Court allowed the decision to stand, *sub nom.* *Fri V. Sierra Club*, 412 *U.S.* 541 (1973), Mr. Justice Powell taking no part in the decision. The effect of the tie vote is explained in *Durant v. Esses Co.*, 74 *U.S.* 107, 113 (1868):

It serves to explain the absence of any opinion in the cause, and prevents the decision from becoming an authority for other cases of like character. But the judgment is as conclusive and binding in every respect upon the parties as if rendered upon the concurrence of all the judges upon every question involved in the case.

Thereafter, the Administrator disapproved all state implementation plans¹⁶ and after considerable delay promulgated regulations to implement the court's PSD mandate.¹⁷ The regulations were quickly challenged by both industrial and environmental groups. Their petitions were consolidated for review in the Court of Appeals for the District of Columbia, which affirmed the regulations as issued.¹⁸ Certiorari had been granted by the United States Supreme Court when the Clean Air Act Amendments of 1977 were considered, and enacted in August of 1977. The Supreme Court subsequently vacated the Circuit Court decision.¹⁹

Why PSD?

Requirements for PSD²⁰ are based upon the notion that air quality, regardless of compliance with fixed ambient standards, should not be permitted to deteriorate from present quality to a significant degree. Rather than predetermine ambient standards, PSD relies upon a region's actual ambient air quality upon which to base measurements. It then permits deterioration from that level equal to certain uniformly established "increments" of degradation.

The PSD concept finds support in the growing realization that we live in a world of limits. It has as its foundation the notion that dilution alone will not solve pollution problems, and it builds upon the conservation ethic which questions the priority of consumptive uses for our natural resources.²¹ Im-

16. 37 Fed. Reg. 23836 (1972). The Environmental Protection Agency issued the first of four alternative proposals on July 16, 1973, nearly two and one-half years after the initial court order. 38 Fed. Reg. 18986 (1973).
17. Final regulations were promulgated on November 27, 1974, 39 Fed. Reg. 42509 (1974). Clarifying amendments were adopted January 16, 1975 (40 Fed. Reg. 2802), June 12, 1975 (40 Fed. Reg. 25004), and September 10, 1975 (40 Fed. Reg. 42011).
18. A panel of that court rendered its decision on August 2, 1976, affirming the regulations as issued. *Sierra Club v. Environmental Protection Agency*, 540 F.2d 1114 (D.C. Cir. 1976), *cert granted*, 45 U.S.L.W. 3666 (No. 76-585).
19. *Am. Petroleum Institute v. Environmental Protection Agency*, 46 U.S.L.W. 3214 (No. 76-585).
20. *Sierra Club v. Ruckelshaus*, *supra* note 3, provides the first judicial enunciation of PSD policy. The court's order styles the issue as one of "non-degradation," while its injunction requires regulations to prevent significant deterioration of air quality. The court's failure to distinguish between "non-degradation" and "no significant deterioration" has caused considerable confusion. Not only are the two terms not synonymous, they are inconsistent. Of the two, no significant deterioration is the preferred term. However, the 1977 Amendments contain a "requirement to prevent significant deterioration," or PSD, and it will be hereinafter cited as such.
21. For an excellent discussion of non-degradation policy as it relates to both air and water pollution, see Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clear Air and Clean Water*, 62 IOWA L. REV. 643, 646 (1977).

portant as these concepts may be, the necessity for PSD provisions in the Clean Air Act Amendments of 1977 have been explained in much less lofty terms. The Reports which accompanied the Amendments and Senator Muskie's statement on the Senate floor, provide detailed enumerations of both public welfare and health purposes considered by Congress in enacting the PSD provisions.²²

In light of the details of the statutory scheme actually adopted, the public welfare justifications cited in the accompanying reports seem to have been the most persuasive arguments for adoption of PSD provisions. Evidence that air pollutants have damaging effects on crops at levels below the national standards were considered. The need for PSD provisions to provide economic equity between various areas of the country, and to discourage industrial relocation away from areas of present industrial concentration were also cited. Both House and Senate reports mentioned the special stewardship of federal agencies to protect the air quality values of certain federal lands, such as national parks and wilderness areas.²³ No doubt all of these factors provided some degree of impetus for the PSD provisions which were incorporated in the 1977 Amendments.

The House Committee also found there was ample reason to believe that the national primary standards are, in many cases, not sufficient to protect the public health. The national primary standards were established in 1970 based on the assumption that margins of safety and safe threshold levels of air pollution existed. That assumption was determined to be unproved and probably false.²⁴ It was found that the primary

22. H. R. REP. NO. 294, 95th Cong., 1st Sess. 45 (1977); S. REP. No. 127, 95th Cong., 1st Sess. 27 (1977); 123 CONG. REC. S13700 (daily ed. Aug. 4, 1977).

23. *Id.* at 128; S. REP. NO. 127, 95th Cong., 1st Sess. 24 (1977).

24. *Id.* The House Commerce Committee considered testimony and reports from the National Academy of Sciences, the Department of Health, Education and Welfare, and the Environmental Protection Agency, which indicated that the amount of health damage varies with the upward and downward variations in the concentration of the pollutants, with no hard lower limit. The Committee concluded that margins of safety provided by the threshold limits were illusionary concepts, and thus the national primary standards alone were not sufficient to protect the public health. See NATIONAL ACADEMY OF SCIENCES, SUMMARY OF PROCEEDINGS: CONFERENCE ON HEALTH EFFECTS OF AIR POLLUTION 7 (Nov. 1973); *Clean Air Oversight—1973 Hearings Before the Subcomm. on Public Health and the Environment, Comm. on Interstate and Foreign Commerce, 93d Cong., 1st Sess. 92-93.* The Committee's conclusions concerning the public health rationale for PSD requirements is summed up well:

This approach of unlimited air quality deterioration is particularly short sighted at a time when all indicators point to the likely necessity for tight-

standards were designed to protect against acute health effects of air pollution, but not against chronic effects, effects on certain classes of individuals, or against cumulative or synergistic effects of various pollutants. Thus, the House Commerce Committee also concluded that in light of the probable health necessity for tightening the ambient air quality standards, sound public policy required that significant deterioration of air quality be prevented.²⁵

The PSD Scheme

The PSD scheme of the 1977 Amendments closely parallels the existing EPA regulations for the protection of air quality control regions in which the air is cleaner than the national standards.²⁶ In a nutshell, the scheme establishes procedures for the division of PSD regions into three classes according to the relative degree of protection to be provided each. The limits on additional pollution are expressed in numbers, or "increments," that are prescribed for each class. States are required to submit plans which incorporate a permit process to control large new emitting facilities and ensure that their construction will not cause the pollution increase limits to be violated, or in time visibility to be impaired in certain national preserves.²⁷ The state plans must also provide that emissions from these new facilities are continuously controlled through the best technological emission control system available.

PSD requirements, and thus the increments, relate to only two pollutants, sulfur oxides and particulates. This is due to the lack of technology or modeling techniques to deal with other pollutants.²⁸

ening the ambient air quality standards to protect public health. This approach is not good preventive medicine . . . The Committee approach to prevention of significant deterioration . . . will help provide the necessary health protection for all Americans, including those most susceptible to the damaging effects of pollution—the young, the aged, and the infirmed.

25. H. R. REP. NO. 294, 95th Cong., 1st Sess. 105 (1977).

26. Pub. L. No. 95-95, § 103, 91 Stat. 688 (1977) (to be codified at 42 U.S.C. § 4707), Clean Air Act § 107(d)(1)(E).

27. Pub. L. No. 95-95, § 127(a), 91 Stat. 732 (1977) (to be codified at 42 U.S.C. § 7473), Clean Air Act § 163(a).

28. The regulations included only these two pollutants as well. Refusal of EPA to include PSD requirements for other pollutants for which criteria had been established was unsuccessfully challenged by the Sierra Club in *Am. Petroleum Inst. v. Environmental Protection Agency*, 540 F.2d 1114 (D.C. Cir. 1976), vacated 46 U.S.L.W. 3214 (No. 76-585). In addition to particulates and sulfur oxides, the Administrator had identified carbon monoxide, nitrogen oxides, hydrocarbons, and photochemi-

If ambient levels of either pollutant in an AQCR are less than the national secondary standard, PSD requirements are triggered.²⁹ Thus, many PSD areas will also be subject to non-attainment requirements by virtue of ambient concentrations of other pollutants which violate the secondary standards in the AQCR.

Similar to the existing regulatory scheme, three classes of PSD areas are provided for. Each class provides for progressively increasing allowable increments which reflect the different purposes for their establishment. Class I provides maximum protection from degradation to maintain pristine conditions. Class II would allow moderate growth while preventing significant deterioration. Class III allows maximum growth consistent with PSD policy.

Nearly all PSD areas are initially classified as Class II by the Amendments. There is an exception for international parks, large national parks and wilderness areas, which are initially classified as Class I. These are so-called "mandatory" Class I areas and may not be reclassified.³⁰

After initial classification, procedures are provided allowing states to reclassify most areas as Class I or Class III as they choose.³¹ Exceptions are for Indian lands, which may not be reclassified by the states,³² and large federal preserves,

cal oxidants as air pollutants which have an adverse effect on public health or welfare. 40 C.F.R. §§ 50.8-50.11 (1975). EPA had also contended that ongoing programs toward reduction of automobile emissions "are adequate to prevent any significant deterioration due to sources of carbon monoxide, hydrocarbons or nitrogen oxides." 39 Fed. Reg. 31006 (1974).

29. Pub. L. No. 95-95, § 127(a), 91 Stat. 731 (1977) (to be codified at 42 U.S.C. § 7471), Clean Air Act § 161.
30. Pub. L. No. 95-95, § 127(a) 91 Stat. 731 (1977) (to be codified at 42 U.S.C. § 7471), Clean Air Act § 161. Clean Air Act § 162(a) provides that mandatory Class I areas will be, "(1) international parks, (2) national wilderness areas which exceed 5,000 acres in size, (3) national memorial parks which exceed 5,000 acres in size, and (4) national parks which exceed 6,000 acres in size and which are in existence on the date of enactment of the Clean Air Act Amendments of 1977." As of August 7, 1977, there were 157 such areas in thirty-four states and the Virgin Islands. Also designated as mandatory Class I areas are all those areas which have previously been classified as Class I under the regulations. The only such redesignation to be grandfathered by this provision was the Northern Cheyenne Indian Reservation located in southeastern Montana. Its redesignation petition was granted by the Administrator on August 5, 1977. Mandatory Class I areas are the only areas singled out for visibility protection under Section 169A of the Clean Air Act. See the text accompanying note 67, *infra*.
31. Pub. L. No. 95-95, § 127(a), 91 Stat. 734 (1977) (to be codified at 42 U.S.C. § 7474), Clean Air Act § 164(b).
32. Lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian governing body. Pub. L. No. 95-95, 91 Stat. 735 (1977) (to be codified at 42 U.S.C. § 7474), Clean Air Act § 164(c). Disputes arising between Indian Governing bodies and states will be determined by the Ad-

which may not be reclassified as Class III.³³ Other federal lands may be reclassified by the states after consultation with the federal land manager.³⁴ The Administrator may disapprove a state's reclassification only if he finds that the redesignation did not meet the procedural requirements of the section. Procedure for Class III redesignation are somewhat more burdensome than for Class I, requiring broader participation by state and local government. They must be approved by the Governor after prescribed consultation with the state legislature. General purpose units of local government representing a majority of the residents of the area to be redesignated must then concur in the state's redesignation.³⁵

The actual increments provided by the Amendments differ substantially from existing EPA regulations in only one way.³⁶ The regulations provided that areas designated as Class III would be "limited to concentrations of particulate matter

ministrator at the request of either party. Clean Air Act § 164(e). The prime sponsor of the provisions did not intend that it be applied to Alaskan native lands, and the language of the amendment should preclude that result. There are over fifty-three million acres of Indian lands in twenty-four states. By far the largest acreage being in Arizona, where there are over twenty million acres.

33. Clean Air Act § 164(a) provides that the following areas may not be redesignated as Class III:

(1) an area which exceeds ten thousand acres in size and is a national monument, a national primitive area, a national preserve, a national recreation area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore, and (2) a national park or national wilderness area established after the date of enactment of this Act which exceeds ten thousand acres in size.

34. Pub. L. No. 95-95, § 127(a), 91 Stat. 734 (1977) (to be codified at 42 U.S.C. § 7474), Clean Air Act § 164(b)(1)(B).

35. Pub. L. No. 95-95, § 127(a), 91 Stat. 734 (1977) (to be codified at 42 U.S.C. § 7474), Clean Air Act § 164(a)(2)(A).

36. The following chart sets forth a comparison of the national primary and secondary standards with increments under the regulations and the 1977 amendments:

Area Classification Pollutants	Figures represent Maximum allowable increments (in micrograms per cubic meter.) over baseline, except for figures representing national primary and secondary standards, (), which are absolute ambient concentrations permitted.			
	1977		National Secondary	National Primary
	Amendments	Regs		
Class I				
Particulate Matter				
Annual Geometric Mean	5	5		
Twenty-four hour maximum	10	10		
Sulfur Dioxide				
Annual	2	2		
Twenty-four hour maximum	8	5		
Three hour maximum	25	25		
Class II				
Particulate Matter				
Annual Geometric Mean	19	10		
Twenty-four hour maximum	37	30		
Sulfur Dioxide				
Annual Geometric Mean	20	15		

and sulfur dioxide no greater than the national ambient air quality standards.”³⁷ This provision drew fire from environmental groups which claimed that allowing deterioration to the national secondary standards was significant deterioration

Twenty-four hour maximum	91	100		
Three hour maximum	512	700		
Class III				
Particulate Matter				
Annual Geometric Mean	37	60*	(60)	(75)
Twenty-four hour maximum	75	150*	(150)	(260)
Sulfur Dioxide				
Annual Geometric Mean	40	80*	—	(80)
Twenty-four hour maximum	182	365*	—	(365)
Three hour maximum	700	1,300*	(1,300)	—

*The regulations provided that Class III areas could be degraded to the National secondary standard. Thus no separate increments were prescribed.

The House and Senate approaches to establishment of PSD increments were quite different. The House expressed increments in terms of fixed percentages of the national secondary standard. These percentages would then be translated into increments of degradation which would be permitted over the baseline. The House bill permitted degradation in Class I areas only in the amount of two percent of the sulfur dioxide standards and ten percent of the particulate standards. Class II increases could only go to twenty-five percent of the standard. Concentrations in Class III areas would be permitted to increase by an amount equal to fifty-percent of the standard.

The Senate bill utilized the straight incremental approach which was adopted by the Conference Committee. The increments utilized in the Senate bill were the same as those adopted by the EPA in their 1975 regulations. However, the Senate bill did not provide for a Class III designation. During conference debate, the House bill was attacked as requiring states to engage in land use planning, as opposed to the Senate proposal which establishes a uniform, if somewhat more degraded, Class II. The increments established in the House and Senate bills are set forth below, with the House percentages converted to increments.

Area Classification	Pollutants	Maximum allowable increases (in micrograms per cubic meter)	
		House	Senate
Class I	Particulate Matter		
	Annual geometric mean	6	5
	Twenty-four hour maximum	15	10
	Sulfur Dioxide		
	Annual Geometric mean	8	2
Class II	Annual Geometric mean	36	5
	Three hour maximum	130	25
	Particulate Matter		
	Annual geometric mean	15	10
	Twenty-four hour maximum	37	30
Class III	Sulfur Dioxide		
	Annual geometric mean	20	15
	Twenty-four hour maximum	91	100
	Three hour maximum	325	700
	Particulate Matter		
Class III	Annual geometric mean	30	—
	Twenty-four hour maximum	75	—
	Sulfur Dioxide		
	Annual geometric mean	40	—
	Twenty-four hour maximum	182	—
	Three hour maximum	650	—

37. 40 C.F.R. § 52.21(c)(2)(ii) (1976). The Administrator promulgated national primary and secondary air quality standards pursuant to Section 109(b)(1), of the Clean Air Act of 1970 (42 U.S.C. § 1857c-4). National primary ambient air quality standards were prescribed, “the attainment and maintenance of which . . . is requisite to protect the public welfare.” National secondary ambient air quality standards were established at levels which were necessary to, “. . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.” Clean Air Act § 109(b)(2). The Administrator was to establish primary and secondary standards for all pollutants which he had identified as having adverse effects on public health and welfare under Section 108(a)(1). While the Administrator was free to revise these standards at any time,

per se, and was contrary to the order in *Sierra Club v. Ruckelshaus*.³⁸ The Amendments remedy the dispute by providing increments of permissible increases over baseline for Class III areas roughly equal to one-half of the national secondary standard.

It is important to note that increments represent permissible increases over baseline concentrations of individual pollutants in the various classes of area. In any of the three classes of area, the established baseline may be quite close to the national secondary standard. In these cases, increased concentration of pollutants will only be permitted until the increment has been exhausted or the standard reached, whichever occurs first. Regardless of existing air quality, in all cases where exhaustion of the increment results in concentrations of pollutants less than the national secondary standards, the increments allow for the same absolute increases in pollution levels in all PSD areas of a given class. This scheme represents a Congressional determination that equity among PSD areas must be provided for, even if it will in some cases result in degradation to the national secondary standard.³⁹

While the regulations contained no variance provisions, a two tiered variance from the Class I increments over federal lands is provided by the Amendments.⁴⁰ Both tiers relate to cases where construction of a major emitting facility would cause or contribute to a violation of the Class I increments.

On the first level, if the responsible federal land manager⁴¹ finds that despite projected violations of the Class I in-

the 1977 Amendments alter Section 106 to require the Administrator to review, and if necessary revise, the standards at five year intervals beginning in 1980. Revision of the standard will not directly effect the PSD increments.

38. *Supra* note 3; 39 Fed. Reg. 42,510 (1974). See also Brief for Petitioners at 22-23, *Sierra Club v. Environmental Protection Agency*, 540 F.2d 1114, (D.C. Cir. 1976).
39. Both House and Senate reports indicate that the PSD scheme of increments of additional pollution is designed to provide equity among all areas in a given class. S. REP. NO. 127, 95th Cong., 1st Sess. 30 (1977). H. R. REP. NO. 294, 95th Cong., 1st Sess. 153 (1977).
40. In addition to variances from the increments, the Governor may exempt emissions from four types of sources from counting against the available increment. These sources are: (1) coal or natural gas conversions under the Emergency Energy Supply and Environmental Coordination Act of 1974; (2) facilities converting from natural gas under a natural gas curtailment plan; (3) sources whose increased emissions are due to construction, and; (4) new sources outside the United States. Pub. L. No. 95-95, § 127(a), 91 Stat. 733 (1977) (to be codified at 42 U.S.C. § 7473), Clean Air Act § 163(c).
41. The "federal land manager" is the federal official charged with responsibility over federal lands of a given type. This is to be distinguished from the supervisor of a particular federal installation or reservation. (e.g., the Secretary of the Interior is the federal land manager of all National Parks.)

crements,⁴² there would be no adverse impact on the air quality related values of the area, he may allow the proposed facility to be built.⁴³ Even then, the facility must not cause or contribute to increases in excess of a separate increment set established by the Amendments. This set is roughly equal to the Class II numbers.⁴⁴ The state always retains the right to disapprove a permit application, regardless of whether the federal land manager approves.

In cases where the federal land manager refuses to make the first tier finding, the Governor, with the concurrence of the federal land manager, may grant the variance if he finds that violations of only the two short term sulfur dioxide standards are responsible for the projected violation.⁴⁵ If the Governor and the federal land manager do not concur, the President must make a non-reviewable decision on the variance.⁴⁶

The second level provision has come to be known as the "five-percent" variance. It may only be granted for the construction of a facility if violations of the Class I increments would occur during not more than eighteen days annually, or five-percent of the days of the year.⁴⁷ If a five-percent

42. Class I increments are merely a presumptive level as they pertain to federal Class I areas. These federal areas are and will continue to be the vast majority of Class I areas. What is actually protected is the "air quality related values" of the Class I area. The increments establish the line at which the burden of proof shifts. It is the point at which the federal land manager and the state must "demonstrate to the satisfaction of" the other, that the air quality related values will or will not, be impaired by emissions from the proposed facility, regardless of compliance with or violation of the Class I increments.

43. Pub. L. No. 95-95, § 127(a), 91 Stat. 737 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act, § 165(d)(2)(C) (iii).

44. Pub. L. No. 95-95, § 127(a), 91 Stat. 737 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(d)(2)(C)(iv). The increment set provided is as follows:
Maximum allowable increases
(in micrograms per cubic meter)

Particulate matter:	
Annual geometric mean	19
Twenty-four hour maximum	37
Sulfur Dioxide:	
Annual arithmetic mean	20
Twenty-four hour maximum	91
Three-hour maximum	325

45. Pub. L. No. 95-95, 91 Stat. § 127(a) (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(d)(2)(D)(i).

46. Pub. L. No. 95-95, § 127(a), 91 Stat. 737 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(d)(2)(D)(ii). In cases where the Governor and the federal land manager do not concur, their recommendations are to be promptly transmitted to the President. The President must approve the variance if he finds that such a variance is in the national interest. The President must act in ninety days to affirm or deny the variance. The decision is final, and non-reviewable.

47. A violation of the three hour standard in one day is considered a violation for the entire day. H. R. REP. NO. 564, 95th Cong., 1st Sess. 153 (1977); 123 CONG. REC. H5045 (daily ed. May 25, 1977).

variance is granted, separate allowable ambient increase numbers become effective for the twenty-four hour and three hour sulfur dioxide standard,⁴⁸ for high and low terrain areas.⁴⁹ While the high terrain variance is greater than that provided for low terrain areas, both are substantially less than the first tier variance.

It appears at first blush that the procedures established for the granting of this variance are overly tortuous considering that the variance allows seemingly insignificant incremental increases on five-percent of the days of the year. However, the enactment of this very limited five-percent variance⁵⁰ should be considered as a significant victory for environmental groups, the Administration, and for the Senate position, which contained no variance provisions.⁵¹ The debate focused on the protection of scenic values in national parks from the effects of large steam fired electric generating facilities in the West, and was a classic struggle between environmentalists and regional economic interests.⁵²

48. Pub. L. No. 95-95, § 127(a), 91 Stat. 738 (1977) (to be codified at 42 U.S.C. § 7475) Clean Air Act § 165(d)(2)(D)(iii).

MAXIMUM ALLOWABLE INCREASE
(In micrograms per cubic meter)

Period of exposure	Low terrain areas	High terrain areas
24-hour maximum	36	62
3-hour maximum	130	221

49. High terrain is defined in the Conference Report as terrain 900 feet above the stack of the facility applying for a waiver. H. R. REP. NO. 564, 95th Cong., 1st Sess. 153 (1977).
50. The House version of the filibustered S. 3219 of the 94th Congress contained a three-percent variance from the Class I sulfur dioxide standards. The provision was not retained by the Conference Committee in their Report. H. R. REP. NO. 1742, 94th Cong., 2d Sess. (1976).
51. While the Senate bill did not contain a variance provision, the issue was certainly not ignored in the upper chamber. Three separate variance provisions were introduced and discussed on the Senate floor. Only one, that offered by Senator Stevens of Alaska, was pressed to a vote. It was defeated 61-33. 123 CONG. REC. S9278 (daily ed. June 9, 1977). The Stevens Amendment was quite similar to the Breaux Amendment (the House variance provision was known as the "Breux Amendment" after its sponsor Congressman John B. Breaux of Louisiana) except for one provision which may have contributed to its downfall. The House bill contained provisions for Class III designation, which was defined as fifty-percent of the national secondary standard. The Breaux variance from Class II allowed increases on eighteen days of the year up to the Class III increments. However, the Senate bill contained no provisions for Class III, consequently the allowable increases under the Stevens Amendment variance would have been up to the national secondary standards. Thus while the duration of the Breaux and Stevens Amendments were the same, the Stevens Class II variance would have potentially allowed twice the incremental increase as that provided by the Breaux Amendment.
52. It is important to note that the five-percent variance is not triggered until after the federal land manager has denied a variance on the grounds that the air quality related values of a preserve *will* be impaired by emissions from the new facility. This determination having already been made, it is altogether proper that the procedures should be tortuous. The final decision is vested in the President because the necessary balancing test may very well require a decision between depriving all Americans of views of their national parks, and curtailing their increased consumption of electrical power.

The House amendments would have provided for variance for sulfur oxides and particulates from both Class I and Class II increments up to the Class II and Class III increments respectively.⁵³ Given the diffusion modeling techniques used in determining if emissions from a particular proposed facility will cause or contribute to violations of the standard, the House passed variance would have permitted actual emissions to increase by factors of between three and twelve. While violations of the standards could have occurred on only five percent of the days of the year, increases in ambient pollution levels might have occurred on every day of the year in the affected PSD areas.⁵⁴ The tight variance procedure adopted in the Amendments is designed to protect against those occurrences. At the same time it provides flexibility which is consistent with either the protection of air quality related values of a given area, or necessary in the national interest.

The concept of "baseline concentration" is essential to the PSD scheme. Each PSD region has its own individual baseline concentration for particulate matter and sulfur dioxide.

Debate on the "five-percent" variance of the Breaux Amendment focused on the construction of one proposed powerplant, the 3,000 megawatt Inter-Mountain Power Project which was planned for a location ten miles east of Capital Reef National Park in southwestern Utah. It was argued on the one hand that damage to the air quality of the Park would be minimal while the economic gains would be great. Southern California would receive needed electrical power without additional burdens on its already overloaded environment. Environmentalists argued that alternative sites were available to the Project at which no variance would be required. In a larger sense, it was contended that such an amendment would have severe impact on air quality values in national parks. The Breaux Amendment was adopted by the House by a vote of 237-172. (123 CONG. REC. H5051 (daily ed. May 25, 1977)).

Congressman Gunn McKay of Utah offered a substitute amendment to the Breaux Amendment which would have permitted a variance from only the Class II standard for impacts on high terrain, defined as not less than 1,000 feet above the height of the stack. The only known beneficiary of the McKay substitute would have been Utah Power and Light. The amendment was perceived as parochial and was defeated 237-170. 123 CONG. REC. H5046 (daily ed. May 25, 1977).

53. 123 CONG. REC. H5034 *et seq.* (daily ed. May 25, 1977).

54. The Breaux Amendment was adopted on the floor of the House of Representatives, and thus is not considered in the House Report on the bill. The floor debates provide the most complete history of the provision. With respect to the actual effects of the Breaux Amendment, many statements were made, including the following by Congressman Andrew Maguire of New Jersey:

Mr. Maguire. Mr. Chairman . . . With respect to the actual figures, if we calculate out what 5 percent or 18 days per year means, it translates into increases in pollution from an individual plant under various alternative conditions of a minimum of 350 percent and a maximum of 1,200 percent.

This is because the worst 18 days of the year are on a declining curve and in relation to the entire year the worst 18 days would provide a very significant portion of the total amount of the pollution.

Mr. Maguire. Mr. Chairman . . . The fact of the matter is, however, that when we take those 18 days and set them aside, what actually happens is that on every other day of the year we will have higher levels of pollution than we would otherwise have been permitted to have."

123 CONG. REC. H5036, H5048 (daily ed. May 25, 1977).

The effective date for baseline concentrations is the date of the first application for a permit in the PSD region or earlier if the state so chooses. The effective baseline concentration is the sum of ambient concentration levels actually existing on that date, plus ambient concentrations projected to be caused by major emitting facilities on which construction commenced prior to January 1, 1975, but which have not yet begun operation.⁵⁵ The provision leaves intact the existing EPA regulatory scheme as to baseline concentration and grandfather date but alters the effective date. The effective date provided by the regulations was the grandfather date, January 6, 1975, and thus did not allow for the use of actual air quality data in determining baseline concentrations.⁵⁶

The PSD increments above baseline are non-renewable, and must be treated as a valuable finite resource by the states.⁵⁷ However, under the baseline definition, it is possible for any number of non-major emitting facilities to be constructed in a PSD region after the date of enactment without having their emissions affect the ability of major emitters to use the available increment. This is true because, unlike the national primary and secondary standards, PSD increments do not involve actual measurements of ambient air quality. Actual ambient air quality is only relevant as to establishment of baseline concentrations. The exhaustion of PSD increments is determined theoretically, through diffusion mod-

55. Pub. L. No. 95-95, § 127(a), 91 Stat. 741 (1977) (to be codified at 42 U.S.C. § 7479), Clean Air Act § 169(4). If there are sources in the region which have commenced construction after January 6, 1975, the emissions from those sources will not be included in the baseline. They will be deducted from the available increment. This is true even if a source has completed construction and is presently operating or emitting pollutants. January 6, 1975 was the date when EPA's PSD regulations became effective.

56. 40 C.F.R. § 52.21(c)(2)(iii) (1976).

57. A strict reading of the baseline provisions would indicate that emissions from new sources would be counted against the increment even if the new source were a replacement for an existing source which was no longer emitting. This is not the intent of Congress or EPA's interpretation of the provision. Letter from G. William Frick, General Counsel, EPA, to Senator Malcolm Wallop, May 23, 1977. The Senate Report clearly states:

This of course [sic] does not include facilities built as replacements for sources in existence before January 6, 1975. Only the emissions from such replacement facilities in excess of those from the source replaced would be deducted from the increment.

S. REP. NO. 127, 97th Cong., 1st Sess. 97 (1977).

However, neither the express language of the statute, nor EPA's proposed PSD rules of November 3, 1977 provide for a "negative increment" or credit for clean-up. Without such a credit, facility owners would go to great lengths to keep older, obsolete, inefficient sources operational for as long as possible to avoid using up the increment. The illogical result of this interpretation would be the complete secession of emissions from major facilities when the useful plant life of presently existing facilities has been reached.

eling, prior to the issuance of individual permits. Thus, the only danger in a state's allowing rapid expansion of non-major emitting facilities, is that the national ambient standards will be approached or even reached, prior to exhaustion of the increment,⁵⁸ thus triggering the more rigid non-attainment provisions.

Visibility

The protection of grand vistas and other scenic values of pristine areas⁵⁹ is the rationale for establishment of Class I areas, and to a lesser extent, one rationale for the entire PSD effort. While the incremental limits do not protect visibility itself as a scenic value, it is protected through two other provisions of the Amendments. The PSD sections contain a permissive Senate-sponsored provision⁶⁰ which was first included in the 1976 bill.⁶¹ The second and mandatory provision is in a separate new House-sponsored section,⁶² which was not in the 1976 bill, or hinted at in the regulations.

Immediate, and permissive protection for visibility and other "air quality related values"⁶³ in mandatory Class I areas

58. S. REP. NO. 127, 95th Cong., 1st Sess. 97 (1977).

59. There is no guarantee that a particular mandatory Class I area is or will ever be "pristine." The PSD increments only control increases over baseline concentrations, which may be substantial. The visibility protection section addresses "man-made air pollution" impliedly realizing that in many areas visibility is naturally impaired. However, visibility will most likely be a significant factor in only those areas which already have pristine conditions. The reasons become obvious in a quote from the Senate Report:

Visibility in miles equals a constant dividend by the particulate concentration. This inverse relationship between visibility and particulate concentrations in effect means the first ton of particulate particles introduced into a clean region decreases visibility more noticeable than does the 500th ton dumped in a dirty area."

"Problems of Electrical Power Production in the Southwest" Senate Committee on Interior and Insular Affairs, S. REP. NO. 1015, 94th Cong., 2d Sess. 123 (1976).

60. Pub. L. No. 95-95, § 127(a), 91 Stat. 737 (1977), (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(d)(2)(C)(ii).

61. H.R. REP. NO. 1742, 94th Cong., 2d Sess. (1976); S. 3219 Section 160(e)(1)(C)(ii) (III)(aa), 94th Cong.

62. Pub. L. No. 95-95, § 128(a), 91 Stat. 742 (1977) (to be codified at 42 U.S.C. § 7491), Clean Air Act § 169A; H. R. REP. NO. 564, 95th Cong., 1st Sess. 62 (1977).

63. The term "air quality related values" is not defined in the Amendments, except to indicate that it includes "visibility." The language of the Conference Report indicates it includes the fundamental purposes for which the federal lands designated as Class I were established and preserved. For example, in the 1916 Organic Act which established the National Park Service, the stated purpose of national park lands is to, "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such generations." 16 U.S.C. § 1 (1970). Similarly, the 1964 Wilderness Act provides that wilderness areas:

[S]hall be administered in such a manner as will leave them unimpaired for future use and enjoyment as wilderness and so as to provide for the protection of these areas (and for) the preservation of their wilderness character.

16 U.S.C. § 1131(a) (1970).

is provided only with the concurrence of the states, as manifested in refusal to grant the necessary permit to a major emitting facility under their PSD plans. Discussion of the variance provisions has shown that the Class I increments are mere presumptive levels established to protect "air quality related values."⁶⁴ On one side of the presumptive increments is the variance, which may be issued if values will not be impaired. On the other side is denial of a permit, regardless of compliance with Class I increments, if issuance would interfere with the values.⁶⁵

The federal land manager is charged with aggressively protecting the air quality values of areas under his jurisdiction, by objecting to the issuance of permits to facilities the emissions from which will interfere with the values. If he errs, it is to be on the side of protecting the air quality related values for future generations.⁶⁶ However, the PSD provisions place no such responsibility on the states beyond ensuring compliance with the increments. Only if the state concurs in the manager's determination will the permit be denied and visibility protected under the PSD sections.

The Amendments also add a second totally new mechanism for visibility protection and improvement in mandatory Class I areas where visibility has been identified as important.⁶⁷ The new mechanism is accompanied by a new national goal, which is simply the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution."⁶⁸ The section might better be typified as a mandate to develop a visibility plan for the future,

64. See the text accompanying note 42, *supra*.

65. The Senate Report expands upon this responsibility:

The bill charges the Federal land manager and the supervisor with a positive role to protect air quality values associated with the land areas under the jurisdiction of the Federal land manager. This means that such officials must seriously consider whether a proposed facility might adversely affect the lands for which they are responsible. If either of them believes there is any risk of such adverse effect, that official should notify the State and initiate the class I analysis. This affirmative responsibility to protect the air quality of Federal lands may involve court challenges for inappropriate permits and facilities constructed without permits, as well as participation in the permit consideration administrative process.⁷

S. REP. NO. 127 95th Cong., 1st Sess. 35 (1977).

66. *Id.* at 36.

67. Pub. L. No. 95-95, § 128(a), 91 Stat. 742 (1977) (to be codified at 42 U.S.C. § 7491), Clean Air Act § 169A(a)(1).

68. Pub. L. No. 95-95, § 128(a), 91 Stat. 742 (1977) (to be codified at 42 U.S.C. § 7491), Clean Air Act § 169A(a)(1).

than a requirement of present law. Congress was wary of the economic cost,⁶⁹ and unwilling to move briskly into these untested waters.

That reluctance is manifested in the section in a number of ways. Deadlines for area identification,⁷⁰ completion and submission of a study to Congress,⁷¹ and the promulgation of regulations, stretch over two full years from date of enactment. The regulations will then require still another plan revision which need only assure "reasonable progress toward" meeting the national visibility goal. If emission limitations on existing sources are necessary, most are to be determined by the state, as are the sources to which they are to be applied.⁷² Installation of the necessary emission control technology is to be "as expeditiously as practical, but not later than five years" from the date of plan revision, and then only on relatively new plants. The meeting of the national goal by a date certain is not to be construed as a "non-discretionary duty" of the Administrator, and thus citizen suits are foreclosed.⁷³ These provisions evidence a more cautious approach than that taken in the Amendment's more familiar sections.

Yet the section is not without substance. It reflects a congressional awareness of the magnitude of the goal it has established. For the first time in the Act's history, state plans must

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69. Economic considerations are to be taken into consideration in determining "reasonable progress" (Clean Air Act § 169A(g)(1)), "best available technology" (Clean Air Act § 169A(g)(2)) and in requiring best available retrofit technology only on plants which have not been in existence more than fifteen years, Clean Air Act § 169A(b)(2)(A).
70. Clean Air Act § 169A(a)(2) requires the Secretary of the Interior to review federal mandatory Class I areas within six months of enactment and determine those in which visibility is an important value. The Administrator will then promulgate a list of such areas within one year of enactment. The Secretary identified proposed mandatory Class I areas for which visibility is an important value. 42 Fed. Reg. 55280 (1977). Only five of the 157 mandatory Class I areas in thirty-four states were identified as not having visibility as an important value. 42 Fed. Reg. 55282-87 (1977).
71. Within eighteen months of enactment the Administrator is required to complete a study and report to Congress on methods for identifying visibility impairment, modeling techniques for determining how manmade air pollution contributes to visibility impairment, methods for preventing visibility impairment, and sources and the types of pollutants which may reasonably be expected to cause visibility impairment. Clean Air Act § 169A(a)(3).
72. Clean Air Act § 169A(b)(2)(A) requires state plans to require emission limitations based upon the installation of best available retrofit technology on plants which have not been in operation for more than fifteen years and which, "as determined by the State . . . emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility." The House bill had required federally imposed emission limitations. This requirement was retained only for fossil fuel-fired electric generating plants with a total generating capacity in excess of 750 megawatts. H. R. REP. NO. 564, 95th Cong., 1st Sess. 155 (1977).
73. Pub. L. No. 95-95, § 128(a), 91 Stat. 744 (1977) (to be codified at 42 U.S.C. § 7604), Clean Air Act § 169A(f).

include requirements for the installation of "best available retrofit technology."⁷⁴ Also mandated in plans are ten-to-fifteen year strategies for progression toward the visibility goal.

Important questions are left to be determined as the regulations are developed. Their determination will have a significant effect on if, how, and to what extent the visibility protection mandate will be carried out. The first concerns are which areas to designate for visibility protection.⁷⁵ There is some uncertainty as to whether the visibility values of an area are to be protected, or only those values within an area.⁷⁶ The Administrator must determine how actual emissions from particular sources are to be related to downstream effects of visibility.⁷⁷ What may be a most difficult question will be how to measure visibility impairment in relation to the values which are sought to be protected in a particular area.⁷⁸

In addition, the synergy of the two visibility provisions is yet to be determined. Legislative history of the visibility section indicates that the protection as it relates to new sources is to be resolved within the PSD procedures. Yet revised state plans must contain long range schemes for progressing toward the goal. This will most likely require more stringent state

74. Pub. L. No. 95-95, 91 Stat. 744 (1977) (to be codified at 42 U.S.C. § 7491), Clean Air Act § 169(A)(b)(2)(A).

75. The original House bill, H.R. 6161, mandated visibility protection for all mandatory Class I areas. The Conference Committee restricted the protection to only those, "in which he (the Administrator) determines visibility is an important value." The Department of Interior has not given great significance to the change. In the Opinion of the Department's Associate Solicitor for Conservation and Wildlife, "the change in the House provision appears not to stem from a Congressional finding that some mandatory Class I areas are not worthy of this protection. Rather it appears to be designed only to insure that the decision is made after studying the proper material." "Legislative History of § 128 of P.L. 95-95, Clean Air Act Amendments—Determination of Whether Visibility is an Important Value." September 21, 1977, Memorandum from the Department of Interior's Associate Solicitor for Conservation and Wildlife, to the Assistant Secretary for Fish, Wildlife and Parks.

76. The language of the statute does not provide explicit guidance on this issue. At hearings held to determine the list of areas required under Section 169A(a)(2), environmental groups contended that the use of the phrase, "... where visibility is an important value of the area," was significant, and that report language referring to "100 mile or more panoramas" supported the contention. However, it is the only time that particular phrase is used. In many other paragraphs the word "in" rather than "of" is used. Given the section's prohibition on the use of "uniform buffer zone(s)," (Section 169A(e)) and the fact that adjoining land would most likely be Class II or possibly even Class III, the success of the environmental groups contention is most unlikely.

77. Much work has already been done on this question. See THE JOHN MUIR INSTITUTE, THE MUSEUM OF NORTHERN ARIZONA PREDICTIONS AND MEASUREMENTS OF POWER PLANT PLUME VISIBILITY REDUCTIONS AND TERRAIN REACTIONS 415 (1976).

78. The only guidance given in the statute is in the definition of "visibility impairment." It, "shall include reduction in visual range and atmospheric discoloration." Clean Air Act § 169A(g)(6).

consideration of permits than that required under the PSD provisions alone. There is also uncertainty as to the extent of the federal land manager's "affirmative responsibility" to protect the air quality related values of areas under his control. Those responsibilities may very likely go beyond exercising his protection responsibility at permit hearings. The national visibility goal, read in conjunction with legislative history and the area's enabling legislation may permit or even oblige him whenever possible to use his other permitting authorities to halt or modify the construction of offending facilities.⁷⁹

The language and the legislative history of the section hint that Congress fully expects to review this section before it is implemented. Yet it is significant in marking the first time that Congress has attacked the problem directly. It provides a new and ultimate top layer on the sandwich of inter-related and inextricable ambient standards, by departing from quantitative measures. As a practical matter its greatest and most immediate effect will probably be on one or two coal fired steam generating plants in the Southwest, the plumes from which have for years been accused of desecrating Grand Canyon and other national parks. This would be appropriate, for the section's legislative history indicates that it is precisely these few plants which prompted its adoption.⁸⁰

Non-Attainment

Regions in which the ambient concentration of any pollutant is in excess of the national primary standards are considered "non-attainment" regions for those pollutants, and are subject to separate requirements of the Act. This article will not attempt to treat non-attainment in a comprehensive fashion, but only in sufficient detail to provide a contrast with PSD. Many regions designated as PSD for one pollutant will be required to comply with non-attainment provisions

79. Language in the Senate report can be read as supporting this conclusion:
The Federal land manager holds a powerful tool. He is required to protect Federal lands from deterioration of an established value even when class I numbers are not exceeded. . . . While the general scope of the Federal Government's activities in preventing significant deterioration has been carefully limited, the Federal land manager should assume an aggressive role in protecting the air quality values of land under his jurisdiction.

S. REP. NO. 127, 95th Cong., 1st Sess. 36 (1977).

80. H.R. REP. NO. 294, 95th Cong., 1st Sess. 203-207 (1977).

for other pollutant concentrations which violate the standards.

The 1970 Act required attainment of the national standards in most regions by May 31, 1975.⁸¹ By that date, almost one-third of the 247 air quality control regions were not in compliance.⁸² The 1970 Act could easily have been read to prohibit the construction of new sources of such pollutants in the non-attainment region, until the standard for that pollutant had been met. However, the EPA adopted a different interpretation which would avoid a complete moratorium on growth in these regions. EPA's "tradeoff" or "offset" policy⁸³ required a case-by-case review of new major sources, requiring that the new source provide a reduction in the offending pollutant from existing sources before new construction commenced. In this way, pollution increases from the new source would be "offset" by a greater reduction obtained from elimination or control of an existing source.

This policy came under immediate fire from both states and industry and was defended but not praised by environmental groups. Industry objected because it placed a disproportionate burden on major new sources. It also made emissions from existing sources a marketable commodity. Industries proposing to build or expand in a non-attainment region were in effect required to pay for the cost of additional emission controls on existing facilities, or simply purchase an existing facility and close it down. The problem was compounded by relative lack of control over mobile sources of pollution which make substantial contributions to the total pollution loading of several pollutants in urban areas. In other locations, the problem was with photochemical oxidants, which are not only produced by industry, but by natural swamps and marshlands as well.

81. The Clean Air Act of 1970 required state plans to provide for the attainment of the primary ambient air quality standards, "as expeditiously as practicable but . . . in no case later than three years from date of approval of such plan." 42 U.S.C. § 1857c-5 (1970), Clean Air Act § 110(a)(2)(A)(i). Certain areas were awarded two year extensions under Section 110(3). These areas were required to comply by May 31, 1977.

82. As of May 12, 1975, the following number of regions were projected to violate the individual pollutant standards on the attainment date: particulate, 60; sulfur oxide, 42; oxidant, 74; nitrogen dioxide, 13; carbon monoxide, 54. However, it was admitted that the numbers were to be viewed with caution as less than adequate information was available. Letter from EPA Administrator Train to Senator Edmund Muskie, May 12, 1975.

83. 41 Fed. Reg. 55524-30 (1976).

Non-attainment regions, accustomed to industrial growth, and bearing the burden of supplying an increasing energy demand, viewed the off-set policy as an insurmountable barrier to growth. Pressure grew for Congress to extend attainment dates, and give the states some "hoop" through which to provide for attainment without necessitating the burden of case-by-case off-sets.

The 1977 Amendments extend attainment dates and require states to resubmit implementation plans by mid-1979. For the interim, EPA's off-set policy is generally endorsed and clarified, but may be waived if states can provide for "reasonable further progress" toward attainment.

The flexibility provided by these amendments is considerably less than the states sought from Congress. But the non-attainment provisions are in fact a "hoop" for the states, yet are tightly drawn so that they will not become a "loophole."

The Amendments continue the off-set policy until July 1, 1979, at which time implementation plan revisions are due.⁸⁴ To obtain a waiver from off-set during this interim, states must have an inventory of emissions, and an enforceable permit program for new and existing major sources. Permits must require existing sources to comply with emission limitations based on "reasonably available control technology."⁸⁵ Permits for new or modified sources need not show an off-set, but must show that when the new sources commence operation, total emissions from existing sources in the region will be sufficiently less as to represent "reasonable further progress." The state's implementation plan must provide that by January 1, 1979, the same level of emission reductions will have been reached as if off-set requirements had been in effect.

Measurements of progress are taken from the baseline. The effective baseline is that provided in the SIP in effect when the permit is applied for, rather than actual emission levels.⁸⁶ The non-attainment baseline, is the plan's total in-

84. Pub. L. 95-95, § 129(a), 91 Stat. 745 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 129(a)(1).

85. Pub. L. No. 95-95, § 128(a), 91 Stat. 74 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 172(b)(3).

86. Pub. L. No. 95-95, § 128(a), 91 Stat. 748 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 173(1).

ventory of emissions in the region, against which to measure reductions in total emissions, to show reasonable further progress. Contrast this with the PSD baseline which is an ambient level against which to measure projected ambient increases, or "increments" of degradation.

By 1979, states are expected to have revised their implementation plans to provide for attainment of the standards by 1982.⁸⁷ Where special problems with photochemical oxidants and carbon monoxide are encountered, the attainment

87. Pub. L. No. 95-95, § 128(a), 91 Stat. 745 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 172(a)(1). The comprehensive nature of the consideration which is expected in these revised plans is revealed in H.R. REP. NO. 294, 95th Cong., 1st Sess. 212 (1977):

Thus, the plan must consider the following factors among others: the actual emissions increases which will be allowed to result from the construction and operation of major new or modified stationary sources in an area; the actual emissions of such pollutant from unregulated sources, fugitive emissions and other uncontrolled sources; actual emissions of the pollutant from modified and existing indirect sources; actual emissions resulting from extension or elimination of transportation control measures; actual emissions of such pollutant resulting from in-use motor vehicles and emissions of such pollutant resulting from stationary sources to which delayed compliance orders or enforcement orders . . . and compliance date extension . . . have been issued; and actual transported emissions.

Given the scope of the inquiry envisioned by the Commerce Committee, an examination of transportation controls appears vital. Without question, the most controversial area of federal-state relations under the 1970 Amendments was that involving transportation controls.

For the most part, the state implementation plans initially submitted to the Administrator contained no transportation controls and no vehicle inspection and maintenance programs. (H.R. REP. NO. 294, 95th Cong., 1st Sess. 282 (1977). Luneberg, *Federal-State Interaction Under the Clean Air Amendments of 1970*, 14 B.C. INDUS. & COM. L. REV. 575 (1973). Comment, *The Clean Air Amendments of 1970: A Threat to Federalism?* 76 COLUM. L. REV. 990 (1976).) despite the fact that twenty-nine AQCRs were predicted to exceed the primary standards for carbon monoxide or photochemical oxidants (H.R. REP. NO. 294, 95th Cong., 1st Sess. 282 (1977)); for those states containing the twenty-nine regions which failed to adopt transportation control measures, implementation plans were promulgated by the Administrator. *Id.*

The issuance by the Administrator of implementation plans containing such provisions and requiring state enforcement resulted in suits by a number of states challenging the authority of the federal government to compel a state to carry out a federally promulgated program. (*Commonwealth of Pennsylvania v. Environmental Protection Agency*, 500 F.2d 246 (3d Cir. 1974); *State of Maryland v. Environmental Protection Agency*, 530 F.2d 215 (4th Cir. 1975); *Brown v. Environmental Protection Agency*, 521 F.2d 827 (9th Cir. 1975); *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975); *Friends of the Earth v. Carey*, 9 E.R.C. 1641 (2d Cir., January 18, 1977). The result was a number of widely differing decisions, at least three of which found statutory if not constitutional deficiencies in the requisite federal authority. *State of Maryland v. Environmental Protection Agency*, 530 F.2d 215 (4th Cir. 1975); *Brown v. Environmental Protection Agency*, 521 F.2d 827 (9th Cir. 1975); *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975).)

While the matter was never fully resolved by the Courts, apparently sufficient doubt existed concerning federal authority in the area to result in a modification of the Congressional approach. The House Commerce Committee Report, reflecting on the fact that transportation controls constitute "a delicate area of federal-state relations . . . adopted an approach . . . intended to involve the least possible intrusion into State affairs consistent with the primary task of protecting public health." H.R. REP. NO. 294, 95th Cong., 1st Sess. 288 (1977). A similar approach was evinced by Senator Muskie in his opening remarks on the floor of the Senate: "Although this is a delicate area of Federal-State relations, it is appropriate to require affirmative State action in the field of transportation controls where this proves necessary to protect the public health." 123 CONG. REC. S9168 (daily ed. June 8, 1977).

date may be postponed until the end of 1987. Plan requirements are detailed and extensive, and are no less stringent than required prior to 1979. They will not be detailed here. However, it is important to note that in addition to the measures enumerated in the plan requirements, states applying for the 1987 oxidant waiver must "identify other measures" which are necessary to provide for attainment. Plan revisions are then expected in 1982, which will contain "enforceable

Under the Amendment agreed to by the Conference, a Governor may temporarily suspend those parts of any applicable implementation plan requiring retrofit on other than commercially owned in-use vehicles, gas rationing which the Administrator finds would have seriously disruptive and widespread economic or social effects of the reduction of on-street parking spaces. Pub. L. No. 95-95 § 108(d)(3), 91 Stat. 685 (1977) (to be codified at 42 U.S.C. § 7410(c)(4), Clean Air Act § 110(c)(4).

While the Governor may suspend such provisions until January 1, 1979 or until a plan revision is submitted, the suspension will not be granted unless the state agrees to submit a plan revision "as determined by the Administrator."

Under the nonattainment provisions adopted by the Conference, maximum discretion is given to the states with regard to transportation controls to provide for the attainment of national primary ambient air quality standards for carbon monoxide and photochemical oxidants. Pub. L. No. 95-95 § 129(b), 91 Stat. § 85 (1977), (to be codified at 42 U.S.C. § 7502(a)(2), Clean Air Act § 172(a)(2). The only specific program required of a state under the Act is a vehicle emission control inspection and maintenance program.

Section 172(b)(2) requires the adoption of "all reasonably available control measures." In his floor statement Senator Muskie reflected on the words used:

The selection of measures to be used is to be made initially by State and local governments. The bill does not specify the 'reasonable measures' to be adopted. However, the administrator cannot reject any measure selected at the State or local level because he considers it to be unreasonable. If it is adopted by the State or regional agency, then it is reasonable.

Conversely, the administrator may determine that all reasonable measures have not been adopted. In this case the Administrator is required to promulgate additional reasonable measures. The court will ultimately rule on any disagreement between the affected State or local agency and the Administrator as to the reasonableness of an EPA proposal.

123 CONG. REC. S9167 (daily ed. June 8, 1977).

Clearly, the Congress has given maximum control to the states, at least in the area of transportation controls, by permitting the adoption of control strategies deemed most appropriate to a particular area or jurisdiction. Undoubtedly concerned with the possible Constitutional infirmities as well as the political deficiencies of more wide ranging federal controls, the Congress in the words of the Commerce Committee Report, "returned to the starting point."

It is clear that the Constitutional question raised regarding the transportation control question greatly concerned the Congress. The matter was given extensive treatment in the House Commerce Committee Report and while not discussed in the Senate Report, Senator Muskie in his introductory remarks on S. 252, devoted no small time to transportation controls.

In effect, the 1977 Amendments changed little in the transportation controls area: specifically required action was limited to vehicle inspection and maintenance programs; a Governor, on submission of an acceptable plan revision, could have certain particularly onerous and objectional transportation controls removed; governmental sanctions were modified to more closely reflect the nature of the federal-state relationship; local units of governments were brought into the plan development and implementation process and the date for final compliance was extended.

However, while state discretion is increased, it may only be for the short term, since the combination of delayed achievement of mobile source goals, as a result of the 1977 Amendments, and high levels of carbon monoxide and photochemical oxidants in urban areas will no doubt necessitate the undertaking of serious transportation control strategies. Whether these strategies are developed by the state and local governments involved or by the EPA itself is subject to question. What seems clear however, is that there are some difficult choices to be made and, if the past is truly prologue, EPA will soon be back in the transportation control strategy business.

measures to assure attainment" by July 1, 1987.⁸⁸ This required mid-course correction evidences a nagging congressional concern that specific plan requirements, stringent as they are, may not be adequate to attain the oxidant and carbon monoxide standards of the Act. Congress fully expects to be reviewing this provision again in the early 1980's.

Control Strategies

The Clean Air Act, like most increasingly complex environmental legislation, contains a seemingly impenetrable maze of acronyms and shaded phrases which are often difficult to decipher, and to relate to one another. Because of this difficulty, in setting forth PSD and related schemes, the authors have purposefully refrained from defining or contrasting the control strategies and enforcement measures which will be used to implement each. To have done so would have necessitated considerable redundancy in the text and constant comparisons by the reader. This section will attempt to alleviate those problems by setting out the control strategies and enforcement measures in a coordinated manner.

Before 1970 the principal legal means for control or abatement of air pollution was the enforcement conference procedure. The abatement conference was a lengthy and uncertain process in which all parties—state, local, and federal agencies and the polluter—were convened to negotiate a schedule for control of the emissions. The Clean Air Act Amendments of 1970 substantially changed that, requiring specific emissions limitations for every source of air pollutants, to meet the national ambient standards within the deadlines.

Thus, the legal background remains the same: there still exists the possibility of a League of Cities-type decision regarding transportation controls while the Act itself contains no changes of significance.

Yet the legislative background is different. Both Senate and House environmental committees, reflecting on the Constitutional questions, have reasserted their intent to legislate in the area and with that assertion have detailed the basis for federal concern and involvement. In his introductory floor statement, Subcommittee Chairman Muskie indicated, at length, the national nature of the carbon monoxide-photochemical oxidants problem and the rationale for Congressional action regarding transportation controls:

By providing roads and highways that facilitate and encourage extensive use of motor vehicles, the States have played a substantial, if unintentional, role in causing the pollution problems that result. And, as a practical matter, State and local governments are in a better position than EPA to attack those problems, which involve millions of motor vehicles, through inspection and maintenance programs and similar measures.

123 CONG. REC. S9168 (daily ed. June 8, 1977).

88. Pub. L. No. 95-95, § 128(a), 91 Stat. 748 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 172(c).

The basic tool of enforcement became the state implementation plan (SIP) with its enforceable requirements.⁸⁹

The 1977 Amendments maintained the Act's reliance on the SIP as the primary enforcement vehicle. However, many amendments in plan requirements were made. Most notably are plan modifications needed to meet the requirements of the PSD, visibility, and non-attainment provisions which have been discussed in some detail already. Other SIP revisions providing some additions, a few limitations, and procedures for delayed compliance.

Added to plan requirements are prohibitions on stationary sources interfering with measures to prevent deterioration, attain or maintain national standards in another state,⁹⁰ or endanger the health and welfare of persons in another coun-

89. S. REP. NO. 127, 95th Cong., 1st Sess. 57 (1977).

90. Clean Air Act § 126. The 1970 Clean Air Act Amendments contained a provision requiring each state implementation plan to include "adequate provisions for intergovernmental cooperation, including measures necessary to insure" the prevention of interstate pollution. Section 110(a)(2)(E), 42 U.S.C. § 1856(a)(2)(E) (1970). While the Administrator implemented regulations providing for information exchange among the states, no effective enforcement measures were adopted. H.R. REP. NO. 294, 95th Cong., 1st Sess. 329 (1977). 40 C.F.R. § 51.21(d) (1977).

The Senate Environment and Public Works Committee, concerned with the problem of interstate pollution and the inadequacy of the 1970 Clean Air Act Amendments adopted an augmented interstate pollution section. The Committee's discussion, as contained in its Report, centered about the "serious inequities" which resulted from the absence of enforcement capability under the 1970 Act. The Committee found "economic and competitive" disadvantages to result from the Act's interstate weaknesses and gave as its example, the circumstances involving the Ohio pollution of West Virginia. Interestingly enough, Chairman Jennings Randolph, was the initial Senate sponsor of the new interstate provision.

Under the Senate amendment, a state must be notified, by the host state, sixty days prior to the construction of any new or modified source which would interfere with that state's prevention of significant deterioration, attainment or maintenance of ambient air standards or protection of the health and welfare of its people. S. REP. NO. 127, 95th Cong., 1st Sess. 42, 145, 158 (1977). Additionally, the host state's implementation plan must contain provisions to prevent such impact upon other states by new or modified sources. The identity of existing sources having such impacts must be given to all nearby States and listed in the State implementation plan. *Id.*

The Senate bill contained a provision for a state or political subdivision to petition the Administrator asserting a violation of the interstate pollution provision. *Id.* 158. If the petition is granted, it is a violation of a state implementation plan for a new or modified source to be constructed or operated, or for an existing source to operate more than three months after the Administrator's decision. *Id.*

The Conference Committee, resolving differences between the House and Senate interstate pollution section adopted the Senate provision but deleted references to pollution which would endanger the health and welfare of another state's citizens. The Committee inserted a requirement not to interfere with a state's efforts to protect visibility. H.R. CONF. REP. NO. 294, 95th Cong., 1st Sess. 146 (1977); Pub. L. No. 95-95 § 108(a)(4), 91 Stat., 685 (1977) (to be codified at 42 U.S.C. § 7410(a)(2)(E)), Clean Air Act § 110(a)(2)(E). Further, an amendment to the Senate provision was adopted permitting an existing source, unable to comply after three years to receive a delayed compliance order. Pub. L. No. 95-95 § 123, 91 Stat. 685 (1977) (to be codified at 42 U.S.C. § 7426), Clean Air Act § 126.

Thus, Congress gave to the states a means of taking action through appeal to the Environmental Protection Agency, against those sources beyond their borders which affect their air quality. It is not unnatural, however, that the power to enforce such a provision lie with the Administrator.

try.⁹¹ Limited is the necessity that "indirect sources" of pollution be considered in SIPs.⁹² These indirect sources are those which do not actually emit pollutants, but which indirectly cause pollutants to be emitted in an area. A prime example is land use controls on the construction of shopping centers which attract motor vehicles. States may require these controls if they choose, and may also require a more stringent emission standard on mobile sources as well.⁹³

Two new sections allow states to provide for delayed compliance from requirements of their SIP, through the issuance of orders.⁹⁴ Delayed compliance orders (DCO) provided for compliance far beyond the required date.⁹⁵ They legitimize the EPA's previous practice of issuing "enforcement" orders which were of questionable legality.⁹⁶

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91. Pub. L. 95-95, § 114, 91 Stat. 710 (1977) (to be codified at 42 U.S.C. § 7415), Clean Air Act § 115. This new section (Section 115 of the 1970 Act, relating to abatement by means of conference procedure was repealed by the 1977 Amendments) allows the Administrator to require SIP modifications to the extent necessary if he determines that emissions originating in a state may reasonably be anticipated to endanger the public health or welfare of persons in a foreign country.
 92. Pub. L. No. 95-95, § 114, 91 Stat. 710 (1977) (to be codified at 42 U.S.C. § 7415), Clean Air Act § 110(a)(5)(A)(i), In *Natural Resources Defense Council v. Environmental Protection Agency*, 475 F.2d 968 (D.C. Cir. 1973) the Court found that there had been insufficient determination of the adequacy of SIPs for the purpose of maintaining national air quality standards. Subsequently, the Administrator further reviewed the SIPs and determined that no state plan contained all of the measures necessary to assure maintenance of the standards, particularly for motor vehicle-related pollutants. EPA then disapproved all state plans and promulgated nationwide requirements for preconstruction review of "indirect sources" of air pollution. These regulations became effective on July 1, 1974 and require the preconstruction review of many parking lots. The effective date of the regulations was postponed many times by congressional and administrative action, and was finally indefinitely postponed on July 3, 1975, by the Administrator, to allow for congressional review.
 93. Pub. L. No. 95-95, § 207, 91 Stat. 755 (1977) (to be codified at 42 U.S.C. § 7543), Clean Air Act § 209(b); Under this new provision, a state may choose to require automobiles sold in the state to meet stricter California emission standards rather than the national emission standards.
 94. S. REP. NO. 127, 95th Cong., 1st Sess. 45 (1977). It is estimated that approximately 3,500 of the 22,000 major emitting facilities are either out of compliance with emission limitations or are not adhering to the approved compliance schedule.
 95. A DCO may postpone any applicable deadline under a SIP. DCOs will allow the continuous operation of a source even though the source was not in compliance with its emission limitations. This may have the effect of delaying the date for attainment of national standards. A DCO will normally be effective for not more than three years. However, paragraph (d)(4) allows for DCOs of five years duration if the installation of innovative technology is contemplated.
 96. Pub. L. 95-95, § 112(a), 91 Stat. 705 (1977) (to be codified at 42 U.S.C. § 7413), Clean Air Act § 113(d). Under the 1970 Act a source that could show a compelling reason could seek an extension of the final compliance date under the provisions of Section 110(f). The Governor would request the one-year extension which the Administrator could grant if he made a number of required findings, including good faith efforts by the source. This was a rather burdensome procedure, and EPA instead chose to issue enforcement orders under Section 113(a) that extended far beyond the compliance dates specified in the plan under Section 110(f). States could not make these orders part of their plans because they were technically inconsistent with attainment and maintenance of the deadlines specified in the Act. The new subsection, 113(d), provides a remedy for this situation and requires that no delay in compliance be granted except under the terms of this new subsection.

A separate new order is created for existing primary non-ferrous smelters.⁹⁷ These "smelter orders" are more liberal than DCOs, reflecting the additional emissions problems encountered. A source under either order is not free of controls, but must use less stringent continuous emissions reduction systems during the term of the order.⁹⁸

Prior to the 1970 Act emission limitations, an attempt was made to relate individual emissions with ambient air quality. The 1970 Act changed that to require a uniform floor of emission limitations. The 1977 Amendments strengthen that strategy, and reflect our continued inability to directly correlate emissions with their downstream ambient impacts. Beyond that, they reflect a certain degree of overlapping, a desire for regional economic protection,⁹⁹ and the need to protect states from industrial pressures for diminished standards.

Though these limitations are expressed in terms of "emissions," they are limitations which must "reflect" the continuous application of the uniform degree of technology to the source, rather than reflecting a desired change in ambient air quality. While emission reductions achieved by a particular type of equipment will be used to determine the permissible emission levels, requirements for the actual installation of particular equipment are prohibited.¹⁰⁰ Only when emission limitations are not feasible may even a design or equipment

97. Pub. L. No. 95-95, § 119, 91 Stat. 712 (1977) (to be codified at 42 U.S.C. § 7419, Clean Air Act § 119. Smelter orders allow for delayed compliance for up to five years. Two such orders may be issued to an individual source which was in operation on the date of the passage of the Amendments. These orders may be issued by either the state or the Administrator. This amendment affirms EPA's present smelter policy.

98. Sources which are under a DCO must in the interim utilize the "best practicable system or systems of emission reduction." Though this term is undefined, its determination must take into consideration the requirements with which the source must ultimately comply. The interim installation of continuous controls will not be required if the source intends to comply through the replacement of the facility or through a complete change in production processes. In these cases, the source will be required to post bond equal to the cost of compliance. Normally, a source under a smelter order will be required to install an interim continuous control technology as expeditiously as practicable, and utilize supplemental or intermittent controls as well.

99. See the text accompanying note 260, *infra*.

100. Pub. L. No. 95-95, § 109(a), 91 Stat. 700-01 (1977) (to be codified at 42 U.S.C. § 7411) Clean Air Act, § 111(b)(5). "[N]othing in this section shall be construed to require any new or modified source to install and operate any particular technological system of continuous emission reduction to comply with any new source standard of performance." By definition, all emission controls (with the exception of best available retrofit technology required for visibility protection) are defined in terms of limitations which must only "reflect" the application of a particular technology to the source.

standards be mandated.¹⁰¹ Congress' decision to require the use of the best continuous systems of technological emission reduction may well be the most significant change in the 1970 act.

In requiring continuous control technology, the 1977 Amendments specifically reaffirm that intermittent, or supplemental controls, will not be considered allowable emission control measures.¹⁰² These strategies would dictate the limitation of emissions through plant closures or modified procedures at times when ambient air quality conditions required such actions so that standards would be maintained.¹⁰³ Also rejected was the use of dispersal techniques such as inordinately taller stacks to achieve compliance with the ambient standards by diluting pollutants.¹⁰⁴ The third limitation was the rejection of the use of low polluting fuels to achieve an emission limitation.¹⁰⁵

101. Pub. L. No. 95-95, § 109(a), 91 Stat. 697 (to be codified at 42 U.S.C. § 7411), Clean Air Act § 111(h) as to new source standards of performance; § 112(e) as to standards for hazardous air pollutants.

102. H.R. REP. NO. 294, 95th Cong., 1st Sess. 190 (1977). Supplemental controls may be used to achieve emissions limitations only under the terms of a smelter order. See note 98, *supra*.

103. The use of supplemental controls was seen as a pollution control technique which often resulted in temporary employee layoff, penalizing the worker for the owner or operator's pollution control decision. Thus, both the Senate and House bills contained provisions which further provided that owners or operators utilizing supplemental or intermittent control systems could not temporarily reduce the pay of any employee because of the use of those controls. If the loss of pay prohibition is not provided for in labor contracts, states are expected to enforce the provision through permit requirements. Clean Air Act § 110(a)(6).

104. Tall stacks have been used to elevate pollutants so that they will be dispersed more widely and will result in lower ambient concentrations at ground level near the source. The Clean Air Act of 1970 did not contain explicit language on the subject, stating only that SIPs must contain, "... emission limitations, schedules and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment." In *Natural Resources Defense Council v. Environmental Protection Agency*, 489 F.2d 390 (5th Cir. 1974), industrial sources argued that tall stacks and other dispersal techniques should be taken into consideration. The House Committee not only cited this case, but recalled Mr. Justice Holmes' statements in the 1907 case of *Georgia v. Tennessee Copper Corp.*, 206 U.S. 230, 239 (1907):

[T]he plaintiff now finds . . . that the tall chimneys in present use [since the complaint was filed] cause the poisonous gases to be carried greater distances than ever before and that the evil has not been helped.

While the Senate, with one small exception, allowed the courts decision to stand alone, the House enacted a new section to thoroughly bury the controversy. Thus a new section 123 has been added to the Act which limits the height of stacks which can be considered for the purpose of required emission limitation, to that height determined to be "good engineering practice." The Senate exception is also contained in the new section but exempts from the limitation only one powerplant in its sponsor's home state.

105. See the text accompanying notes 159 and 185, *infra*. In its discussion of intermittent control strategy, the House Commerce Committee Report contains a discussion of low sulfur coal as a means of continuous emission reduction. H.R. REP. NO. 294, 95th Cong., 1st Sess. 89 (1977). Stating that the use of low sulfur coal alone in any existing source would clearly constitute a continuous emission reduction system, the Report points out that utilization of such coal permits the use of vast national reserves of low sulfur coal which can be burned without washing or flue gas desul-

The most stringent limitations imposed are for new, rather than existing, sources. All new major sources of pollutants must meet "new source performance standards" (NSPS).¹⁰⁶ Waivers for up to four years are provided only for sources which propose to test innovative emission reduction systems.¹⁰⁷ NSPS is the floor, or base, upon which the other new source emission standards are built. The various standards represent judgments as to the emissions limitations which the various technologies can accomplish in practice. So to a certain extent these decisions focus on technology. However, a redeeming quality of the scheme is that the decision as to which emission limitation must be applied is in fact related to the pollutant controlled¹⁰⁸ and needs of the air quality control region in which the source is or will be located.

furization. Additionally, the Report continues, through the washing of low sulfur coal, even more of such coal could be used again without scrubbers. *Id.*

However, it should be noted that this discussion clearly runs counter to the thrust of the local coal amendment introduced on the floor of the House by the Chairman of the House Subcommittee on Health and the Environment whereby a source could be issued an order to utilize only local coal. Needless to say, low sulfur coal ceases to be a possible strategy in those cases in which such orders are issued.

106. Pub. L. No. 95-95, § 109(a), 91 Stat. 697 (1977) (to be codified at 42 U.S.C. § 7411), Clean Air Act, § 111. See page 783, *infra* for a thorough discussion of new source performance standards.
107. Pub. L. No. 95-95, § 109(a), 91 Stat. 701 (to be codified at 42 U.S.C. § 7411), Clean Air Act § 111(k). Waivers from new source performance standards for the use of innovative technology may be granted by the Administrator. These waivers may be granted for only seven years from issuance, or four years from the date the source actually commenced operation. It may be granted only after the Administrator has found that the technology has not been adequately demonstrated, will not cause or contribute to unreasonable risk to public health or welfare, and that the waiver will not prevent attainment or maintenance of national ambient standards.
108. Separate emissions standards must be promulgated for pollutants to which no ambient air quality standard is applicable and which in the judgment of the Administrator may cause, or contribute to, an increase in mortality or serious irreversible or incapacitating illness. For these "hazardous pollutants", the 1970 Act (Clean Air Act § 112) requires the Administrator to establish any such standard at the level which, "in his judgment provides an ample margin of safety to protect the public health from such hazardous air pollutant." (Clean Air Act § 112(b)(1)(B)). Two comparisons between hazardous standards and the other emission standards of the Act are worthy of note. The first is that the emission standard is based on public health, rather than on what can be achieved through the application of a certain level of technology. The second is the failure of Congress to speak in terms of "emission limits", but rather in terms of emission standards, although the distinction is not explained.

The 1977 Amendment altered Section 112 in only one way. It added a new subsection (e) which provides that the Administrator may promulgate a design equipment, work practice or operational standard when it is not feasible to prescribe an emission standard. This is consistent with a similar provision which was added as new subsection (h) to section 111 pertaining to new source standards of performance.

The Amendments created a new Section 122 of the Act which requires that the Administrator review within one year four pollutants, and if warranted, place them on lists to be regulated under either hazardous emission standards or new performance standards. In the alternative the Administrator could choose to treat them under section 108 criteria and control techniques. For three of the pollutants; cadmium, arsenic, and polycyclic organic matter, Congress felt that the EPA should be provided with some impetus to control them. For the fourth, radioactive pollutants, there was some doubt as to EPA jurisdiction which has been clarified

As may be expected, requirements in non-attainment areas are stringent. In these areas, sources must meet the "lowest achievable emission rate" (LAER). It is equal to the most stringent emission limitation which is either contained in the SIP of any state, or which is actually being achieved in practice. However, it must be actually, not theoretically, achievable for the new source.¹⁰⁹ In PSD areas, in addition to meeting NSPS, sources must meet limitations based on what the state determines to be the "best available control technology" (BACT) for that individual source at that location.¹¹⁰

Of these three emission limitations for new sources, the key Congressional decision, and what will no doubt be dominant in practice, is the federally determined NSPS. All three emission limitations are based on the application of the "best" technological system of continuous emission reduction which has been adequately demonstrated. However, NSPS applies to all new sources in the United States, wherever located.¹¹¹ While the stated intent of the amendments is that the states will have flexibility, state determinations as to technology, in at least PSD areas, will take a much diminished role under the new NSPS definition.

Economic considerations must be taken into consideration in all three limitations. However, as might be expected, cost will be given much less weight for LAER determinations in non-attainment areas, with health considerations retaining primary importance.¹¹² For NSPS, "the cost of achieving such emission reduction, and any non-air quality health and environmental impact and energy requirements" must be taken into consideration.¹¹³ Much the same considerations are taken into account for purposes of state BACT determinations. However, added flexibility is provided by the case-by-case approach utilized.¹¹⁴

by the amendments. Regarding all four substances, the Administrator is only required to review and make a determination as to whether to list them.

109. H.R. REP. NO. 564, 95th Cong., 1st Sess. 157 (1977).

110. Pub. L. No. 95-95, § 127(a), 91 Stat. 736 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(a)(4).

111. 42 U.S.C. § 7411 (1970), Clean Air Act § 111(e).

112. H.R. REP. NO. 564, 95th Cong., 1st Sess. 157 (1977).

113. Pub. L. No. 95-95, § 109(a), 91 Stat. 699 (to be codified at 42 U.S.C. § 7411), Clean Air Act § 111(h)(1).

114. Pub. L. No. 95-95, § 127(a), 91 Stat. 735 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165(a).

The Congress reacting to the severe winter of 1976-77 and the resultant energy shortages suffered by much of the Mid-west and the East, adopted an amend-

Emission limitations on existing sources in all areas are considerably less demanding than for new sources. While emissions from new sources must reflect the installation of the "best" technology in all areas,¹¹⁵ those of existing sources in non-attainment areas need only evidence "reasonably available" technology.¹¹⁶ Though "reasonably available control technology" is not defined in the Act, it will be defined by EPA for a number of sources.

PSD provisions require no emission limitations on existing sources, but dismiss them as part of the baseline. However, sources in PSD areas may be required to retrofit when necessary to protect or remedy visibility impairment. Sources determined to be causing visibility impairments will be required to install "best available retrofit technology." The definition of this term is left to the states for most sources, and to the Administrator for fossil fuel-fired power-plants of at least 750 megawatts. This unique requirement may be distinguished from BACT in that federal standards do not serve as a floor. While the language of this section may be interpreted to require the actual installation of that technological system determined to be "best", the clear intent of the provision is that best available retrofit technology be stated as an emission limitation.¹¹⁷

The impact of this control will be mitigated somewhat by the relatively small number of sources to which it will be applied, and the rigorous economic analysis which is required.¹¹⁸

Though the emission limitations required of individual and classes of source, are important control strategies of the

ment to the Act providing authority for a Governor, after notice and a hearing, to petition the President for a determination as to the existence of a "national or regional energy emergency." Pub. L. No. 95-95, § 107(a), 91 Stat. 685 (1977) (to be codified at 42 U.S.C. § 7410(f)), Clean Air Act § 110(f). If the President makes such a finding, the Governor may temporarily suspend any part of a state implementation period. The suspension shall remain in effect for a period of not more than four months, unless disapproved by the Administrator. (The President may also grant a temporary suspension. If the State implementation plan was issued by the Administrator, only the President may grant a temporary suspension of the SIP.)

The authority under Section 110(f) was utilized for the first time by the State of Ohio during the UMW strike of 1977-78.

- 115. Pub. L. No. 95-95, § 109(a), 91 Stat. 699 (1977) (to be codified at 42 U.S.C. § 7411), Clean Air Act § 111(a)(1)(C).
- 116. Pub. L. No. 95-95, § 129(b), 91 Stat. 747 (1977) (to be codified at 42 U.S.C. § 7502), Clean Air Act § 172(b)(3).
- 117. H.R. REP. NO. 564, 95th Cong., 1st Sess. 155 (1977).
- 118. *Id.*; Pub. L. No. 95-95, § 128(a), 91 Stat. 744 (1977) (to be codified at 42 U.S.C. § 7604), Clean Air Act § 169A(g)(2). In determining "best available retrofit technology" the state or the Administrator must take the following factors into consideration:

Act, they do not overshadow the SIP as the prime control strategy of the Act. The emission limitations will become increasingly important under the 1977 Amendments. However, it is the SIP which must provide for attainment and maintenance of air quality standards, the prevention of significant deterioration, and reduction in visibility impairment. While the establishment of emission limitation must take into consideration economic and technological feasibility, no such requirement is imposed upon measures which may be necessary for states to provide for attainment of the Act's several goals. Thus, the SIP is the major vehicle which provides for attainment, and whatever degree of technology-forcing which may be necessary to that attainment.

Enforcement

Enforcement options are significantly expanded under the 1977 Amendments. Civil penalties for violations by stationary sources are provided for the first time. But more significantly, the administrative imposition of delayed compliance penalties and emergency orders is authorized. Citizen suit authority is altered to reflect the adoption of the PSD provisions.¹¹⁹

While the 1970 Act provided criminal penalties, no civil penalties were authorized for violations of stationary source regulations, or SIP requirements. In addition to injunctive relief, which was provided under the 1970 Act, civil penalties up to \$25,000 per day may be assessed for violation of certain of the Act's emission limitations and plan requirements.¹²⁰ In providing for these penalties, the Amendments distinguish between the owner or operator of a major stationary source, against which the Administrator must commence a civil action, and the owner or operator of another source, against which he *may* commence such an action. Consistent

[T]he costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

The economic considerations required here are more explicitly comprehensive than those required of the emission limitations. Also of note is the unique requirement that the direct environmental improvements of installation of the technology be directly considered in determining equipment requirements.

119. Pub. L. No. 95-95, § 303(a), 91 Stat. 771 (1977) (to be codified at 42 U.S.C. § 7604), Clean Air Act §§ 304(a) and (f).

120. Pub. L. No. 95-95, § 111(b), 91 Stat. 704 (1977) (to be codified at 42 U.S.C. § 7413), Clean Air Act § 113(b).

with economic concerns expressed in many other new provisions, in assessing the amount of civil penalties, the court must take into consideration not only the seriousness of the violation, but the economic impact on the source as well.¹²¹

Criminal penalties under the Act are altered only slightly.¹²² The most significant change is the redefinition of the term "person" who may be criminally liable. Added to the already broad definition is "any responsible corporate officer."¹²³ This definitional change will allow for the imposition of criminal penalties against the corporate officers under who's responsibility a violation has taken place, and not just those employees directly involved in the operation of the violating source.

The addition of administratively imposed non-compliance penalties for major sources are designed to reduce the attractiveness of non-compliance as a lesser economic burden and thus promote equity among sources. It is to be imposed in addition to civil and criminal penalties, beginning on July 1, 1979.¹²⁴

To achieve equity, the penalty is to be set at a level equal to the full cost of compliance, over a normal amortization period of not to exceed ten years. It is to be paid quarterly over the period of non-compliance. When the source comes into compliance, the issuing agency must make reimbursement or collect for underpayment, based on the actual cost of compliance.¹²⁵ This scheme should not only encourage rapid compliance but should prevent a non-complying source from attaining a competitive advantage over complying sources.

A significant addition to the Administrator's enforcement arsenal is authority to administratively issue emergency or-

121. Pub. L. No. 95-95, § 111(b), 91 Stat. 704 (1977) (to be codified at 42 U.S.C. § 7413), Clean Air Act § 113(b). "In determining the amount of any civil penalty to be assessed under this subsection, the court shall take into consideration (in addition to other factors) the size of the business, the economic impact of the penalty on the business, and the seriousness of the violation."
122. Pub. L. No. 95-95, § 111(c), 91 Stat. 705 (1977) (to be codified at 42 U.S.C. § 7413), Clean Air Act § 113(c). Criminal penalties are made applicable to violations of the Act's new delayed compliance and smelter order provisions.
123. Pub. L. No. 95-95, § 111(c), 91 Stat. 705 (1977) (to be codified at 42 U.S.C. § 7413), Clean Air Act § 113(c)(3).
124. Pub. L. No. 95-95, § 120(b)(3), 91 Stat. 716 (1977) (to be codified at 42 U.S.C. § 7420), Clean Air Act § 120(b)(3).
125. Pub. L. No. 95-95, § 120(d)(4), 91 Stat. 718 (1977) (to be codified at 42 U.S.C. § 7420), Clean Air Act § 120(d)(4).

ders. Existing law only went so far as to allow the filing of civil actions to "immediately restrain" polluting sources which presented an immediate and substantial endangerment to public health. Administrative enforcement orders may be issued only when the filing of a civil action would not provide immediate relief, and will only be effective for twenty-four hours unless a civil action is filed.¹²⁶ Prior consultation with state authorities is required when possible.

The administrative imposition of non-compliance penalties and emergency orders adds an important new dimension to the Act. They should provide expedition enforcement and flexibility, while reducing the burden on the judicial system. When proper procedures are used, their constitutionality should not be in question.

While arguably the PSD provisions represent a new Congressional standard, there is no doubt that the principles guiding the existing EPA regulatory scheme have been affirmed, and the scheme itself has been significantly altered. The new visibility protection provisions adopted represents the first time that "natural" environmental values have been directly protected through federal clean air legislation.

These standards and their accompanying control strategies represent a new determination in Congress' approach to air pollution problems, which does not underestimate the stringency of requirements necessary to meet the Act's goals. However, these standards and strategies are inextricably intertwined with the Act's non-attainment and mobile source provisions. Thus, their attainment and maintenance will no doubt be directly affected by economic and energy concerns which are expressed throughout, and with which each source must contend. A realization of the pressures on these sources is clearly manifest in Congress' clear desire to strengthen and broaden the enforcement provisions of the Act.

126. Pub. L. No. 95-95, § 302(a), 91 Stat. 770 (1977) (to be codified at 42 U.S.C. § 7604), Clean Air Act § 303(a). The emergency order will only be effective for twenty-four hours unless a civil action is filed under this section. In that case, the order will be effective for another forty-eight hours, or such longer period as the court may prescribe pending litigation. Persons who willfully violate any such order may be fined not more than \$5,000 for each day of violation. This is actually quite mild considering that civil penalties for non-compliance may be assessed to \$25,000 per day of violation. Section 313 is also amended to require the Administrator to report to Congress the number of these episodes annually.

NEW SOURCE PERFORMANCE STANDARDS AND
LOCAL COAL—A NEW GOAL?

New Source Performance Standards

The Clean Air Act Amendments of 1970 specifically preempted the area of New Source Performance Standards for regulation by the federal government. Under the authority provided in the Act, the Administrator was directed to publish and to periodically revise a list of categories of stationary sources which he determined to "contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare".¹²⁷ After the promulgation of such categories, the Administrator was directed to establish federal standards of performance for new or modified sources¹²⁸ within them.¹²⁹ Standards of performance were to reflect "the degree of emission limitation achievable through the application of the best system of emission reduction which the Administrator determines has been adequately demonstrated."¹³⁰

While a state could have established procedures for the implementation and enforcement of new source performance standards within its boundaries, such standards could not be less stringent than the applicable federal standards.¹³¹ The Administrator, upon finding the state's procedure to be adequate, was directed to delegate authority to the state for the implementation and enforcement of such standards.¹³² However, this delegation did not prohibit the Administrator from enforcing any federally established new source performance standard.¹³³

127. Section 111(b)(1)(A), 42 U.S.C. § 1857c-6(b)(1)(A) (1970).

128. Section 111(a)(2), 42 U.S.C. § 1857c-6(a)(2) defines "new source" as "any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source."

129. Section 111(b)(1)(B), 42 U.S.C. § 1857c-6(b)(1)(B) (1970); Section 111(a)(2), 42 U.S.C. § 1857(a)(2) (1970).

130. Section 111(a)(1), 42 U.S.C. § 1857c-6(a)(1) (1970). The cost of achieving such reduction is to be taken into account.

131. Section 116, 42 U.S.C. § 1857c-6(c)(1) (1970). Under Section 118, 42 U.S.C. § 1875c-7(c)(2) (1970), the President is authorized to exempt federal sources from emission standards. However, he may not exempt federal facilities from compliance with new source performance standards.

132. Section 111(c)(1), 42 U.S.C. § 1857c-6(c)(1) (1970). Such authority did not extend to new sources owned or operated by the federal government.

133. Section 111(c)(2), 42 U.S.C. § 1857c-6(c)(2) (1970). Under Section 111(e), 42 U.S.C. § 1857c-6(e) (1970), it was unlawful for any owner or operator of any new source to operate in violation of an applicable NSPS after the effective date of a standard promulgated under Section 111. Enforcement authority for the Adminis-

In late December 1971, the Administrator issued a list of categories to be regulated while announcing new source performance standards for those categories.¹³⁴ Included within those regulations were standards of performance to limit emissions of sulfur dioxide from fossil fuel-fired steam generators.¹³⁵ While the new source performance standards were to be applied to numerous sources, perhaps the most significant source was coal-fired power plants.¹³⁶

However, the sulfur dioxide standards established for these plants by the EPA in December 1971 were set at levels which could be attained by installation of flue gas desulfurization (FGD) units or by the use of untreated low-sulfur coal alone.¹³⁷

Reacting to these standards, the Senate-House Conference Committee in late September 1976 agreed to a massive revision of Section 111 and to the legislative history which was its base.¹³⁸ With the death of the Clean Air Act Amendments of 1976 on adjournment sine die of the 94th Congress,¹³⁹ it

trator was contained within Sections 113, 42 U.S.C. § 1857c-8 (1970), and 114, 42 U.S.C. § 1857c-9 (1970).

134. Standards of Performance for New Stationary Sources, 40 C.F.R. part 60 (1973). These regulations were later subjected to technical revision. Standards of Performance for New Stationary Sources, 39 Fed. Reg. 20790 (1974). Section 110 requires that state implementation plans contain a "procedure . . . for review prior to the construction or modification of the location of new sources to which a standard of performance will apply." Section 110(d)(2)(1). However, such review was to be conducted simply to determine that the construction of the new or modified source would not cause an Air Quality Control Region to exceed the primary or secondary standard (and if within a clean air area, not to contribute to significant deterioration of the air quality). Regulations promulgated by the Administrator in 1973 provided for the establishment of a permit licensing or approval system for state enforcement of NSPS under Section 111.
135. Standards of Performance for New Stationary Sources, 40 C.F.R. part 60 (1973).
136. In 1970, in excess of one half of the nation's total sulfur oxide pollution was the result of fuel combustion in fossil fuel power plants. ENVIRONMENTAL PROTECTION AGENCY, (AP-115), NATIONWIDE AIR POLLUTANT EMISSION TRENDS, 1940-1970 5 (1973). Coal fired power plants, while accounting for fifty-five percent of the megawattage of such plants, were, in 1974, responsible for ninety-four percent of their total emissions of sulfur dioxide. ENVIRONMENTAL PROTECTION AGENCY, REPORT OF THE HEARING PANEL, NATIONAL PUBLIC HEARINGS ON POWER PLANT COMPLIANCE WITH SULFUR OXIDE AIR POLLUTION REGULATIONS 11 1974. At least one commentator has contended that "controlling emissions from power plants, especially those burning coal, is the most important regulatory problem faced by EPA." Ayres, *Enforcement of Air Pollution Controls on Stationary Sources Under the Clean Air Amendments of 1970*, 4 ECOLOGY L.Q. 441, 443 (1975).
137. H.R. REP. NO. 294, 95th Cong., 1st Sess. 187 (1977).
138. H.R. CONF. REP. NO. 1742, 94th Cong., 2d Sess. 8-11, 88, 89 (1976).
139. A Congress lasts for two years commencing in January of the year following the biennial election and is made up of a first and second session. Bills introduced in the first session may carry over to the second since it is the same Congress. With the start of a new Congress, each bill must be reintroduced. See H.R. DOC. 377, 93d Cong., 2d Sess. (1974).

became necessary for the Congress to begin anew in its revision of new source performance standards.¹⁴⁰

In its Report on the Clean Air Act Amendments of 1977, the Commerce Committee enumerated the purposes which—according to the Report—had formed the basis for the New Source Performance Standards adopted in 1970:¹⁴¹ placing all states on an equal footing in their efforts to attract industry and control development,¹⁴² enhancing the potential for long-term economic growth by limiting the amount of clean air that each new source could utilize,¹⁴³ achieving long-term cost savings by building control technology into new plants rather than requiring retrofit at a later time,¹⁴⁴ permitting expanded use of energy resources by burning higher sulfur coals,¹⁴⁵ freeing low sulfur fuels for use in older and smaller plants for which retrofit to FGD technology would not be physically or economically feasible,¹⁴⁶ creating incentives for improved technology through standards subject to frequent revision¹⁴⁷ and freeing low sulfur coal or oil for use in older plants thus

140. The objectionable nature of EPA's NSPS surfaced much prior to the House consideration of the matter.

On March 20, 1973, counsel for the Oljato Chapter of the Navajo Tribe corresponded with the Administration of the EPA objecting to the new source performance standards as applied to plants planned in the Four Corners area of the Southwest. That request was rejected by the Director of EPA's Office of Air Quality Planning and Standards on May 7, 1973.

On June 22, 1973, the Oljato Chapter filed suit in the District Court for the District of Columbia seeking an order requiring the Administrator to promulgate new source standards of performance necessitating the use of scrubbers. The District Court dismissed the case for want of jurisdiction. On appeal, the United States Court of Appeals, District of Columbia Circuit on July 7, 1975, dismissed the matter as falling outside the timing and requirements of the Clean Air Act and for want of jurisdiction. *Oljato Chapter of Navajo Tribe v. Train*, 515 F.2d 654, 655-57 (D.C. Cir. 1975).

On August 6, 1976, the Oljato and the Red Mesa Chapters of the Navajo Tribe and the Sierra Club petitioned EPA to revise the sulfur dioxide standard so as to require a ninety percent reduction in sulfur dioxide emissions from all coal-fired power plants. Citing "advances in technology since 1971" and referring to the "compelling case" presented, the EPA agreed to investigate the matter. On January 27, 1977, EPA announced that it had initiated a new study of the matter. On August 7, 1977, the Clean Air Act Amendments were signed into law. Under the directive contained in Section 111(b)(6) to revise new source standards of performance for fossil fuel-fired stationary sources and in response to petition of the Navajo Tribe and the Sierra Club the EPA initiated rulemaking.

141. H.R. REP. NO. 294, 95th Cong., 1st Sess. 184-87 (1977).

142. *Id.*

143. *Id.* at 184-185.

144. *Id.* at 185.

145. *Id.* at 186.

146. *Id.* at 186. The Committee appears to have made uncertain use of the phrase "older and smaller" using those words twice and "smaller or older" once. The phrase used has some significance to the Committee's rationale since an amendment adopted on the floor of the House could have prevented older but larger utilities from making use of low sulfur coal. The amendment, to be discussed in text below, was adopted without objection after being offered by Congressman Paul Rogers, Chairman of the Subcommittee on Health and the Environment. *Id.*; 123 CONG. REC. H5026-5027 (daily ed. May 25, 1977).

147. H.R. REP. NO. 294, 95th Cong., 1st Sess. 186 (1977).

preventing shutdown of such plants and the resultant unemployment.¹⁴⁸

Thus, it was the Committee's contention that Section 111 of the 1970 Act, necessitated the application of "best practicable control technology."¹⁴⁹ To the Committee's disappointment, however, "the actual standards of performance . . . sometimes had very different, almost opposite results."¹⁵⁰ This was particularly so in the case of new coal-fired power plants where the standards, as established by the EPA could be met either by the use of untreated low sulfur coal or scrubbers.¹⁵¹

While the considerations enumerated by the House Report obviously reflect the approach of the Commerce Committee in 1977, it is questionable whether such concerns were a part of the legislative history of the Clean Air Act Amendments of 1970.¹⁵² In fact, the final phraseology of Section 111 as adopted in 1970 differs significantly from the language carried into the Conference by either the House or the Senate and does further damage to any contention that a specific control technology was envisioned.¹⁵³

148. *Id.* This purpose appears subject to the same deficiencies as seen above in footnote 146.

149. *Id.* at 184.

150. *Id.* at 187.

151. *Id.* The Committee detected a number of difficulties with such standards:

1. The standards give a competitive advantage to those States with cheaper low-sulfur coal and create a disadvantage for Mid-western and Eastern States where predominantly higher sulfur coals are available;
2. These standards do not provide for maximum practicable emission reduction using locally available fuels, and therefore do not maximize potential for long-term growth;
3. These standards do not help to expand the energy resources (this is, higher sulfur coal) that could be burned in compliance with emission limits as intended.
4. These standards aggravate compliance problems for existing coal-burning stationary sources which cannot retrofit and which must compete with larger, new sources for low sulfur coal.
5. These standards increase the risk of early plant shutdowns by existing plants (for the reasons stated above), with greater risk of unemployment.
6. These standards operate as a disincentive to the improvement of technology for new sources, since untreated fuels could be burned instead of using such new, more effective technology.

Exactly what these concerns had to do with the Clean Air Act Amendments of 1970 and the purposes of Section 111 is discussed in text below.

152. A careful examination of the Commerce Committee Report accompanying H.R. 17255 in 1970 fails to reveal a discussion of any of the above stated purposes with the exception of that precluding "efforts on the part of States to compete with each other in trying to attract new plants without assuring adequate control." H.R. REP. NO. 1146, 91st Cong., 2d Sess. 3 (1970).

153. A comparison of S. 4358 and H.R. 17255 with the bill as agreed to by Conference and the Congress reveals that the final Section 111 language more closely resembles that of the Senate. While the House language would have required that new stationary sources "be designed and equipped to prevent and control such emissions to the fullest extent compatible with the available technology and economic feasibility" (H.R. REP. NO. 1146, 91st Cong., 2d Sess. 35 (1970)), the Senate required

While the matter of seven year old inconsistencies or faulty recollections of legislative intent are not worthy of extended discussion, what is significant is the appearance in 1977, inartfully disguised in the language of 1970, of a brand new goal of the Clean Air Act—the protection of local coal.¹⁵⁴

In its revision of Section 111, the Commerce Committee, and later the full House, amended standard of performance to mean “the degree of emission reduction¹⁵⁵ achievable through the application of the best technological¹⁵⁶ system of continuous¹⁵⁷ emission reduction”.¹⁵⁸ The Report makes clear that this revision was intended to prevent any major new stationary source from meeting NSPS requirements merely by the use of untreated oil or coal—necessitating instead the use of a “technological system.”¹⁵⁹

Thus, the House of Representatives, citing the need to protect states one from the other,¹⁶⁰ enhance long term growth by limiting the pollution increments available to each new source,¹⁶¹ achieve long-term cost savings by preventing even-

that any new stationary source standards “reflect the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology processes, operating methods, or other alternatives”, S. REP. NO. 1196, 91st Cong., 2d Sess. 91 (1970). Interestingly enough, given the 1977 House Commerce Committee Report, the Act differed from the very similar Senate Bill in the following significant respects: “greatest” was deleted, “limitation” was substituted for “control” and the phrase “best system of emission reduction” replaced “latest available control technology.” Section 111(a)(1), 42 U.S.C. § 1857c-6(a)(1) (1970); S. REP. NO. 1196, 91st Cong., 2d Sess. 91 (1970). Despite what some may consider to be the strong language of S. 4358 regarding “standards of performance”, the Public Works Committee Report contained the following modifying language: “The Secretary should not make a technical judgment as to how the standard should be implemented. He should determine the achievable limits and let the owner or operator determine the most economic acceptable technique to apply.” S. REP. NO. 1196, 91st Cong., 2d Sess. 17 (1970).

154. See also Commerce Committee discussion of the local coal issue relative to the prevention of significant deterioration. H.R. REP. NO. 294, 95th Cong., 1st Sess. 165-69 (1977).
155. As opposed to “limitation” under the 1970 Act. *Id.* at 355; Section 111(a)(1), 42 U.S.C. § 1857c-6(a)(1) (1970).
156. “Technological” was not a part of the 1970 Act provisions regarding new source performance standards. Section 111(a)(1), 42 U.S.C. § 1857c-6(a)(1) (1970); H.R. REP. NO. 294, 95th Cong., 1st Sess. 355 (1977).
157. H.R. REP. NO. 294, 95th Cong., 1st Sess. 355 (1977).
158. The question of “continuous” emission reduction as opposed to “intermittent control strategies” and the related “tall-stacks” question is discussed at length. See the text accompany note 102, *supra*.
159. H.R. REP. NO. 294, 95th Cong., 1st Sess. 188 (1977). While it was the Committee’s intent that the Administrator in determining the “best technological system of continuous emission reduction” consider: (1) treatment of emission products in the post combustion or postpollution generating stage (*e.g.*, flue gas desulfurization, catalytic combustors, electrostatic precipitators) and (2) precombustion treatment of fuels (*e.g.*, solvent refining, oil desulfurization/denitrication at the refinery), it was also its intent that “in the case of fuel-burning new stationary sources, the standards . . . require a specified percentage reduction in emissions achievable when applying best technology to untreated fuels.” *Id.*
160. A goal achieved by the adoption of any national standards.
161. A corollary of this argument and one utilized by the Commerce Committee *Id.* at

tual retrofit,¹⁶² protect older and smaller plants by assuring them a source of low sulfur coal,¹⁶³ create incentives for improved technology¹⁶⁴ and insure the utilization of local coal, enacted major modifications in the NSPS of the Clean Air Act. Given the rather limited discussion of all but the final objective—which was explored at length—there can be no question as to the legislative intent behind Section 111.¹⁶⁵

While the House was engaged in a revision of NSPS, the Senate merely made passing reference to 1970 Congressional action adopting Section 111,¹⁶⁶ thus leaving the section basi-

191 is that concerning the inexact nature of establishing national primary and secondary standards and the uncertainty of any "margins of safety" with the resultant need for even more stringent standards for new sources. While this argument has some validity, it does not belong in a discussion of new source performance standards. Instead, such a point is most appropriately made in support of the need for change in the national primary standard or for strict standards regarding the Prevention of Significant Deterioration. Such was the approach of the Senate Environment and Public Works Committee. S. REP. NO. 127, 95th Cong., 1st Sess. 27-37 (1977).

162. It would seem that once a new source standard had been met retrofit would not later be demanded in any case.

163. The extent to which this goal could be achieved was later limited by both the House and the Senate discussion on local coal.

164. Such a goal would appear to be accomplished by other provisions of the Act regarding technology. See note 107, *supra*.

165. In his statement before the House Subcommittee Administrator Costle endorsed the Committee new source performance standards:

We support the provision in the House bill requiring that new sources use best available control technology (BACT) considering cost, energy, environmental, and health impact.

First, we will more effectively limit the increased emissions resulting from greater coal utilization. Second, we will use less of our air quality resource for each new facility, thereby allowing more growth within the constraints of air quality requirements. Third, the BACT requirement will encourage powerplants to use locally mined high and medium sulfur coal instead of bringing in low sulfur coal from other regions.

This will avoid much of the regional unemployment and economic disruption that would result from greater reliance on low sulfur coal rather than on control technology. Finally, the BACT requirement will minimize the overall atmospheric loading of pollutants in our environment.

Clean Air Act Amendments of 1977: Hearings on H.R. 4151, H.R. 4758, and H.R. 4444 before the Subcomm. on Health and the Environment of the House Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess. 1678 (1977).

166. The Senate Report saw 1970 action regarding new source performance standards as being undertaken to assure the use of available technology while stimulating the development of new technology. S. REP. NO. 127, 95th Cong., 1st Sess. 17 (1977). That the House and Senate had a fundamental difference of approach on the matter of new source performance standards appears clear from the following exchange during the Senate Environment and Public Works mark-up of S. 252:

Senator Domenici. I am not trying to get any exceptions for anyone, but 90 percent cleanup of low sulfur coal going in at .3, 3/10ths of a percent sulfur, is an enormous technological cleanup as compared with 90 percent cleanup of two percent or 2.5 percent sulfur coal somewhere else.

I don't want to give an unfair advantage to low sulfur coal. I am on record not wanting low sulfur coal from the West to be shipped to the East, but I don't believe there is any relevancy to clean air in mandating the Director of EPA use as a performance that kind of criteria.

Senator Muskie. Are we talking about uniformity in reduction or uniformity in results?

Mr. Billings (Senior Professional Staff Member). That is the basic disagreement between the House and the Senate has always articulated

cally intact.¹⁶⁷ The Senate instead directed its efforts to the creation of a new section providing for the Prevention of Significant Deterioration, as well as to the modification of the nonattainment provisions.¹⁶⁸

Interestingly enough, with the exception of the local coal arguments and their corollaries, the Senate rationale for the adoption of the PSD Standards were strikingly similar to those of the House.¹⁶⁹ Citing the need to provide for a "margin of safety" to protect national air quality standards¹⁷⁰ while providing for growth potential by preventing first new sources from absorbing an entire air resource,¹⁷¹ the Committee adopted the requirement that major new sources utilize best available control technology.¹⁷²

Thus, moved by similar concerns, the Senate and House chose entirely different methods of accomplishing their objectives.¹⁷³ On reflection, the Senate approach seems the most internally consistent since the matter of assuring margins of safety is most appropriately considered in a discussion of the prevention of significant deterioration.

The BACT Standard as adopted by the Senate was to be implemented by the states on a case by case basis.¹⁷⁴ In mak-

that its standard or performance results in what actions come out of the staff.

Senator Domenici was concerned, and I think rightly so, that the effect of the House bill was to have uniformity of control measures and change in result, depending on what the input was. So you got not a standard of performance, but a technological standard.

Senator Domenici. That is correct.

Mr. Billings. It is a basic policy question.

Unpublished hearings before the Committee on Environment and Public Works on mark-up of Clean Air Act Amendments of 1977, p. 126 (March 30, 1977).

167. The only exception was a provision adopted by the Senate Environment and Public Works Committee amending Section 111 to provide a procedure for granting waivers from new source performance standards for technological innovations. S. REP. NO. 127, 95th Cong., 1st Sess. 43, 160-162 (1977).

168. *Id.* at 27-37, 54-56, 143-158.

169. *Id.* at 29-30.

170. *Id.* at 29.

171. *Id.* at 31.

172. *Id.* at 31, 150-58.

173. That the Senate had no intention of establishing hard and fast, as had the House, a particular technology appears clear from the statement of Senator Howard Baker, member of the Environment and Public Works Committee during discussion of a local coal amendment:

This amendment, for the first time, would permit the direct ordering of scrubbers by some authority at some point. EPA has never had the authority to order scrubbers. We have carefully guarded against that in the Environment and Public Works Committee over the years. We require a result, not a technique.

Similar remarks were made by Senators Pete V. Domenici and Robert T. Stafford. 123 CONG. REC. S9452 (daily ed. June 10, 1977). For examples of what appears to be the Senate's flexible approach see S. REP. NO. 127, 95th Cong., 1st Sess. 11-12, 17-18, 31-32 (1977).

174. S. REP. NO. 127, 95th Cong., 1st Sess. 31 (1977). It would appear that the Senate

ing that decision, the states were to consider energy, environmental and economic impacts and other costs, with the weight assigned to each of these factors to be determined by the states themselves.¹⁷⁵ While the Environment and Public Works Committee Report stressed the importance of the states in the determination of best available control technology,¹⁷⁶ the Committee established as a floor to such a determination standards of performance for new stationary sources and standards for hazardous air pollutants.¹⁷⁷ Yet the floor thus established was significantly different from the NSPS as desired by the House. The Senate bill still contained the original 1970 Section 111 language which lacked the words "technology" or "control" and the phrase "latest available".¹⁷⁸ It was thus conceivable, as the matter went to Conference, that the States and possibly industry would have the flexibility envisioned by the Senate.¹⁷⁹

was well aware of the rather amorphous nature of the concept of BACT:

Senator Domenici. This lowest possible achievement—

Mr. Billings (Senior Professional Staff Member). Lowest achievable emission rate?

Senator Domenici. Yes, is that going to be a new word of art like BACT?

Mr. Billings. Yes, sir, and unlike BACT, it would be defined.

Senator Domenici. Defined by us?

Mr. Billings. In the statute.

Unpublished hearings before the Committee on Environment and Public Works on mark-up of Clean Air Act Amendments of 1977, p. 288 (March 25, 1977).

175. S. REP. NO. 127, 95th Cong., 1st Sess. 31, 153 (1977).

176. "This policy (mandatory use of BACT) will be implemented by the States." *Id.* at 11. "The Administrator's role is one of monitoring State action. . . . But the Administrator could not and should not attempt to burden this section (110) with unnecessary requirements and guidelines." *Id.* at 12. "Thus, each State is free to—and encouraged to—examine and impose regulations for the use of the latest technological developments as a requirement in granting the permit." *Id.* at 18. "The decision regarding the actual implementation of best available control technology is a key one, and the committee places this responsibility with the State, to be determined in a case-by-case judgment. It is recognized that the phrase has broad flexibility in how it should and can be interpreted, depending on site." *Id.* at 31.

177. *Id.* at 31, 159.

178. Just as significant as the language finally adopted in 1970 was the Senate Report from which the basic approach was taken in defining standard of performance: "Standards of performance . . . refers to the degree of emission control which can be achieved through process changes, operation changes; direct emission control, or other methods. The Secretary should not make a technical judgment on how the standard should be implemented." S. REP. NO. 1196, 91st Cong., 2d Sess. 17 (1970).

179. That the Senate bill envisioned such flexibility is clear from two separate colloquies on the Senate floor:

Mr. Domenici. Let me respond first, so there is no misunderstanding.

The State, as far as nondegradation is concerned, sets the best available control technology. I would agree with the Senator that even clean coal might have to have some control technology on it. I do not think that is an inordinate request. On the other hand, there are some who think we ought to clean up that clean coal to the same extent, in terms of the percentage of cleanup, as we should clean up dirty coal. I assure the Senator that is not in this bill, I will do all I can to resist that, because that has no rationale in terms of pollution. It may even be in the House bill. We will do all we can to see that it does not come out of conference that way. That has no economic or pollution probability. It

The agreement reached by the Conference Committee in the first few days of August 1977 retained the thrust and purpose of the House New Source Performance Standards while keeping much of the Senate language regarding specific emission standards under the section on Prevention of Significant Deterioration.¹⁸⁰ Under the bill as agreed to and finally adopted, a standard of performance with respect to fossil fuel-fired stationary sources means a standard setting an allowable emission limitation while requiring the achievement of a percentage reduction in emissions which would have resulted from untreated fuels.¹⁸¹ The Act further requires any standard of performance under Section 111 to reflect the degree of emission limitation as well as the percentage reduction available through the use of the "best technological system of continuous emission reduction."¹⁸² The phrase "technological system of continuous emission reduction" is de-

does not have anything to do with either one, the way they are attempting to set the cleanup percentage. I do not believe the Senate bill does that.

123 CONG. REC. S9255 (daily ed. June 9, 1977).

Mr. Bumpers. The pending bill, S. 252, does not amend section 111. I would like to make explicit my belief that it is not the intention of the Senate to require that scrubbers be installed universally. While scrubbers may be appropriate at some power plants in some States on certain types of coal, it by no means follows that that will be true in every State in the Union . . .

Mr. President, I would like to ask the distinguished Senator from Maine, the manager of the bill, whether he agrees with this position.

Mr. Muskie. I agree with the Senator from Arkansas. New source performance standards are set forth as limitations on emissions. The means chosen to achieve those limitations is within the control of the owner of the source.

123 CONG. REC. S9277 (daily ed. June 9, 1977).

180. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 129-130, 148-53 (1977).

181. Pub. L. No. 95-95, § 109(c)(1)(A), 91 Stat. 699-700 (1977) (to be codified at 42 U.S.C. § 7411(a)(1), Clean Air Act § 111(a)(1). On the other hand, non-fossil fuel-fired stationary sources need meet only an established allowable emission limitation Pub. L. No. 95-95, § 109(c)(1)(A), 91 Stat. 699-700 (1977) (to be codified at 42 U.S.C. § 7411(a)(1)(B), Clean Air Act § 111(a)(1)(B)). This standard must still reflect the best technological system of continuous emission reduction as discussed below. Pub. L. No. 95-95, § 109(c)(1)(A), 91 Stat. 699-700 (1977) (to be codified at 42 U.S.C. § 7411(a)(1), Clean Air Act § 111(a)(1).

182. *Id.* To be considered in this determination by the Administrator are cost, non-air health and environmental impact and energy requirements. The inclusion of the consideration of energy and non-air quality impacts was undertaken in part in response to recommendations of the Ford Administration as well as others. H.R. REP. NO. 294, 95th Cong., 1st Sess., 190 (1977). See also Bagge, *Coal and Clean Air Law: A Case for Reconciliation*, 4 *ECOLOGY L.Q.* 479 (1975); Schroeder, *Impact of Current Air Pollution Legislation and Litigation on Energy Production*, 54 *ORE. L. REV.* 515 (1975); Comment, *Consideration of Technological and Economic Factors in Air Pollution Control*, 44 *CIN. L. REV.* 573 (1975). How significant these changes will be in light of Commerce Committee Report language remains to be seen.

The authority of the Administrator to require the installation of a particular technological system is restricted under the Act to those circumstances when the Administrator determines that it is not feasible to prescribe or enforce a standard of performance. The phrase "not feasible to prescribe or enforce an emission standard" means those circumstances under which:

(A) a hazardous pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant,

fined to include an inherently low polluting or non-polluting technological process for production or operation as well as a technological system for continuous emission reduction "including precombustion cleaning or treatment of fuels".¹⁸³

The Statement of the Managers included specific language on the agreement reached by the Conference Committee regarding the revised new source performance standards.¹⁸⁴ According to the Managers, the new source performance standards were upgraded to "preclude use of untreated low sulfur coal alone as a means of compliance".¹⁸⁵ In pursuit of this objective fossil fuel-fired sources would need to meet both a standard of performance for emissions as well as a percentage reduction in pollution from untreated fuel.¹⁸⁶

While somewhat of a concession was made by the House in permitting percentage reduction credit for fuel cleaning processes, the efficacy of such a credit appears subject to question given the Managers' statement that any EPA regulations concerning this provision must be consistent with the purposes of the House provision.¹⁸⁷

Additionally, while the Administrator is given discretion to set standards reflective of varying fuel characteristics in the establishment of the national percent reduction required of new fossil fuel-fired sources, it was the intent of the Conferees that any departure from an uniform national requirement be accompanied by a finding that such a decision will not undermine the purposes of the House provision—"maximizing the use of locally available fuels."¹⁸⁸

or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.

Only after such a requirement has been met may the Administrator "promulgate a design, equipment, work practice, or operational standard, or combination thereof, which reflects the best technological system of continuous emission reduction." The same factors are to be considered here as required under Section 111(a)(1)(C).

183. Pub. L. No. 95-95, § 109(c)(1)(B), 91 Stat. 700 (1977) (to be codified at 42 U.S.C. § 7411(a)(7)), Clean Air Act § 111(a)(7). Through an apparent oversight there are now two definitions contained under Section 111(a)(7): "technological system of continuous emission reduction" and "modification" as it relates to conversion to coal.

184. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 130 (1977).

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.* This provision could well result in a lower standard in the West, where the utilization of low sulfur Western coal may not adversely affect the Conference goal of the protection of local coal.

Thus, by requiring a percentage reduction in the emissions of each particular fossil fuel, the new source performance standards adopted by the Congress have abolished any advantage to the consumption of low sulfur fuels and have—because of the technological state of the art—necessitated the application of fuel gas desulfurization units.¹⁸⁹

The flexibility which the Senate apparently envisioned by its structure of NSPS and PSD is abrogated by the establishment of a scrubber floor to the state BACT determinations under the PSD section. What more a state can demand of a fossil fuel-fired unit seems uncertain. What this means and what conclusions we might draw will be withheld pending a more particular discussion of the question of local coal.¹⁹⁰

In order to implement Section 111 of the 1977 Clean Air Act Amendments, the Environmental Protection Agency, sometime prior to August 7, 1978, must promulgate a list of categories of major stationary sources¹⁹¹ not yet included in previously promulgated listings.¹⁹² As well, within one year

189. According to the Report of the House Commerce Committee, the use of coal washing alone (which results in up to forty percent sulfur removal) would not be a substitute for scrubbers despite the fact that the economic impact of coal washing may be less than a flue gas desulfurization unit. H.R. REP. NO. 294, 95th Cong., 1st Sess. 189 (1977).

190. In those instances in which a new source performance standard has not been promulgated by the Administrator subsequent to the enactment of the Clean Air Act Amendments of 1977, an amendment adopted in Conference requires Administrator approval of the State's determination of BACT wherever a source proposing to construct in a Class III area will emit pollutants which exceed the level allowed in a Class II area. While the Statement of the Managers contains no discussion of the reasoning for such a provision, it is certainly in keeping with the establishment of a federal floor on state BACT decisions.

191. Major stationary source is defined to mean:
[A]ny stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator.)

Pub. L. No. 95-95, § 301(a), 91 Stat. 770 (1977) (to be codified at 42 U.S.C. § 7602(j)), Clean Air Act § 302(j). Grain elevators with a storage capacity of less than 2,500,000 bushels are expressly exempted from any standards applicable to grain elevators promulgated by the Administrator under Section 111. Pub. L. No. 95-95, § 109(a), 91 Stat. 699 (1977) (to be codified at 42 U.S.C. § 7411(i)), Clean Air Act § 111(i). This provision was adopted on the floor of both the House and the Senate in order to protect small operators from possible future EPA action. The amendments were widely supported and adopted by voice vote. 123 CONG. REC. H5055-5056 (daily ed. May 25, 1977); 123 CONG. REC. S9443-9449 (daily ed. June 10, 1977).

192. Pub. L. No. 95-95, § 109(a), 91 Stat. 697 (1977) (to be codified at 42 U.S.C. § 7411(f)(1)), Clean Air Act § 111(f)(1). Standards must be promulgated on twenty five percent of the source categories within two years, on seventy-five percent of the source categories within three years and on all source categories within four years. In determining the priority for the promulgation of standards in accordance with Section 111(f)(1), the Administrator is required to consider quality of air pollution emissions, extent to which such pollutants may be reasonably anticipated to endanger public health or welfare and the need for national standards given the

from enactment, new source standards of performance—as required by the 1977 amendments—for fossil fuel-fired stationary sources are required to be promulgated by the Environmental Protection Agency.¹⁹³ For all other categories of sources, the Administrator is required to promulgate regulations establishing new source standards of performance within a four year period.¹⁹⁴

In order to obtain a permit for construction as required under the Act,¹⁹⁵ the owner of any new or modified source must demonstrate that the technological system of continuous emission reduction to be utilized will enable the source to comply with the applicable standard of performance. The owner or operator must also show that the construction or

mobility and competitive nature of the category. Pub. L. No. 95-95, § 109(a), 91 Stat. 697 (1977). (to be codified at 42 U.S.C. § 7411(f) (2)), Clean Air Act § 111 (f)(1).

93. Pub. L. No. 95-95, § 109(b), 91 Stat. 699 (1977) (to be codified at 42 U.S.C. § 7411(b)(6)), Clean Air Act § 111(b)(6). If a new or modified source has “commenced construction” prior to the date of publication of the proposed revised standards compliance with the new standard is not required. The word “commenced”, a definition of no small significance in this instance was a subject of much controversy both prior to and during Congressional action on the Clean Air Act Amendments of 1977. See note 55, *supra*.

However, it is not defined in Section 111 nor in the general definition Section 302. Instead “‘commenced’ as applied to construction” is defined in Section 169 under Part C—“Prevention of Significant Deterioration of Air Quality.” It is unlikely that this definition could be applied to Section 111 since Section 169 precedes the definitions contained therein with: “For purposes of this part . . .”. However, perhaps such a definition demonstrates, to some extent, Congressional intent:

The term “commenced” as applied to construction of a major emitting facility means that the owner or operator has obtained all necessary pre-construction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (i) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (ii) entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed within a reasonable time.

- Pub. L. No. 95-95, § 127(a), 91 Stat. 740-41 (1977) (to be codified at 42 U.S.C. § 7479(2)(A)), Clean Air Act § 169(2)(A).
194. Such standards are to be reviewed by the Environmental Protection Agency every four years and, if appropriate, new standards are to be promulgated. Previously, the operative phrase was “may, from time to time.” Pub. L. No. 95-95, § 109(c)(1), 91 Stat. 700 (1977) (to be codified at 42 U.S.C. § 7411(b)(1)(B)), Clean Air Act § 111 (b)(1)(B). This amendment was contained in the House passed bill and while the Commerce Committee Report did not explain the rationale in its adoption, it could, in part, be justified as encouragement to the continued development of new technology by assuring that those developing such new technology would be rewarded by a promptly revised standard.
195. Pub. L. No. 95-95, § 108(b), 91 Stat. 694 (1977) (to be codified at 42 U.S.C. § 7411(a)(2)(I)), Clean Air Act § 111(a)(2)(I); Pub. L. No. 95-95, § 129(b), 91 Stat. 746 (1977) (to be codified at 42 U.S.C. § 7502(a)(2)), Clean Air Act § 172(a)(1); Pub. L. No. 95-95, § 129(b), 91 Stat. 747 (1977) (to be codified at 42 U.S.C. § 7502(b)(6)), Clean Air Act § 172(b)(6); Pub. L. No. 95-95, § 108(b), 91 Stat. 694 (1977) (to be codified at 42 U.S.C. § 7411(a)(2)(J)), Clean Air Act § 111(a)(2)(J); Pub. L. No. 95-95, § 127(a), 91 Stat. 735-39 (1977) (to be codified at 42 U.S.C. § 7475), Clean Air Act § 165.

modification and operation of the source will comply with all other regulations of the Act.¹⁹⁶

Coal Conversion

Since the 1973 Mid-east oil embargo and the resultant national energy crisis, a matter of primary concern to the Congress has been the ability of American industry to convert to the nation's most abundant energy source.¹⁹⁷ In 1974, Congress passed and the President signed "The Energy Supply and Environmental Coordination Act" (ESECA),¹⁹⁸ a law requiring the Federal Energy Administration to prohibit the use of oil or natural gas by fossil fuel-fired power plants capable of burning coal. In addition to FEA authority, ESECA contained authorization for the Administrator of the Environmental Protection Agency to set-aside—for any power plant or industrial boiler converting to the use of coal—until 1979 the application of state implementation plan requirements.¹⁹⁹ However, the authority of the EPA to extend compliance dates contained a number of restrictions: The use of coal could not cause or contribute to air pollution in excess of the national primary ambient air quality standards.²⁰⁰ The use of coal in an Air Quality Control Region in which a national primary ambient air quality standard with regard to any air pollutant was not being met could not result in the emission of such pollutants in an amount exceeding the limitation contained within the state implementation plan.²⁰¹ As well, the use of coal could not result in an increase of "any air pollutant for which national ambient air quality standards have not been promulgated . . . and that such increase may cause

196. Pub. L. No. 95-95, § 109(e), 91 Stat. 701 (1977) (to be codified at 42 U.S.C. § 7411(j)), Clean Air Act § 111(j).

197. According to the Bureau of Mines of the Department of Interior the United States possesses some 256 billion tons of economically recoverable coal, which is equivalent to approximately 5,040 quadrillion Btus. (One quadrillion Btus is enough energy to electrically heat and cool about seven million American homes for one year.) GENERAL ACCOUNTING OFFICE, U.S. COAL DEVELOPMENT—PROMISES, UNCERTAINTIES, EMD 77-43, 3.1 (1977). Coal thus represents ninety percent of America's fossil fuel reserves. Parker & Thompson, U.S. COAL RESOURCES AND RESERVES, FEA/B-76/2101, 2 (1976).

198. Pub. L. No. 93-319, 88 Stat. 248 (1974) (to be codified at 15 § U.S.C. § 791).

199. Section 119, 42 U.S.C. § 1857c-10 (Supp. V 1975). Under Section 119, the only sources subject to a Federal Energy Administration order and the accompanying compliance date extension on switching to coal were those burning oil or natural gas.

200. Section 119(d)(2)(A), 42 U.S.C. § 1857c-10(d)(2)(A) (Supp. V 1975).

201. Section 119(c)(2)(D), 42 U.S.C. § 1857c-10(z)(2)(D) (Supp. 1975). This provision is often referred to as the "regional limitation."

(or materially contribute to) a significant risk to public health."²⁰²

Thus, under the 1974 amendments to the Clean Air Act, a source prohibited from using petroleum products or natural gas by an order of the FEA or which began to convert to coal as a primary energy source in 1973 and 1974, and did in fact convert to the use of coal, could obtain a compliance date extension from the EPA.²⁰³ Such an extension could be issued on the submission by the source of an EPA approved plan for eventual compliance.²⁰⁴

The years since the adoption of ESECA have not seen a decrease in America's dependence on foreign oil²⁰⁵ nor a lessening in the need and pressure for coal conversions.²⁰⁶ Thus during 1977, in an effort to broaden the applicability and use of the compliance date extension concept as initially utilized in ESECA, the Congress adopted a number of coal conversion amendments to the Clean Air Act.

Of initial importance was the adoption of an extension for final compliance until December 31, 1980²⁰⁷ for any source unable to comply with a state's implementation plan as a result of an order or decision (prior to August 1978),²⁰⁸

202. Section 119(d)(3)(B)(iii), 42 U.S.C. § 1857c-10(d)(3)(B)(iii) (Supp. V 1975).

203. Section 119(c)(1)(A) and (B), 42 U.S.C. § 1857c-10(c)(1)(A) and (B) (Supp. V 1975).

204. Section 119(c)(2)(A)(iii), 42 U.S.C. § 1857(c)(2)(A)(iii) (Supp. V 1975). A source converting to the use of coal was required to submit a plan for attaining the "most stringent degree of emission reduction . . . required to (be) achieve(d) under the . . . implementation plan in effect on the date of submittal." While final compliance was to take place as soon as practicable but no later than December 31, 1978, a one year postponement was possible under Section 119(c)(3) in accordance with Section 110(f). Section 119(c)(2)(C), 42 U.S.C. § 1857c-10(c)(2)(C) (Supp. 1975).

205. Today the United States is more dependent on foreign oil than it was during the embargo of 1973. In 1977, oil imports accounted for forty-two percent of United States oil consumption as opposed to thirty-five percent in 1973. GENERAL ACCOUNTING OFFICE, U.S. COAL DEVELOPMENT—PROMISES, UNCERTAINTIES, EMD 77-43, 2.1 (1977).

206. A fundamental element of President Carter's National Energy Plan was the adoption of a revised and simplified regulatory program for conversion to coal. EXECUTIVE OFFICE OF THE PRESIDENT, THE NATIONAL ENERGY PLAN 63-66 (1977). While the Senate-House Conference Committee has reached a final agreement on a coal conversion program, approval by the Congress of that agreement must await a final decision on the tax-gas portions of the National Energy Plan. At this writing, no solution has been reached.

207. The Act requires "as expeditiously as practicable" but no later than December 31, 1980. Pub. L. No. 95-95, § 112(a), 91 Stat. 706 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(A), Clean Air Act § 113(d)(5)(A)).

208. Such a decision must be the result of an actual or anticipated curtailment of natural gas supplies under a curtailment plan as approved by the Federal Power Commission (renamed Federal Energy Regulatory Commission as of October 1, 1977) or the appropriate state regulatory commission. Pub. L. No. 95-95, § 112(a), 91 Stat. 706 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(a), Clean Air Act § 113(d)(5)(A)).

to convert to coal.²⁰⁹ Additionally, the Act contains a provision permitting further delay in requiring compliance of up to five years.²¹⁰

While sources converting to the use of coal must continue to meet the national primary ambient air quality standards, as under ESECA²¹¹ the blanket prohibition regarding the "regional limitation" as contained in the 1974 amendments was modified. Under the 1977 amendments, if a source located in an Air Quality Control Region in which the national primary ambient air quality standard for any pollutant is being exceeded, a compliance date extension cannot be granted until it is shown that the pollutants emitted from the source in question will affect only infrequently²¹² and have but an insignificant effect upon the air quality concentrations of such pollutants²¹³ and will not cause or contribute to concentrations in excess of the primary standard.²¹⁴

As required under ESECA, the Administrator must continue to establish emission limitations for the period during which a source possesses a delayed compliance order.²¹⁵ However, while the 1974 amendments specified a standard assuring the absence of pollutants in excess of the primary standard, Congressional action in 1977 requires in addition to the

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209. Pub. L. No. 95-95, § 112(a), 91 Stat. 706 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(a)), Clean Air Act § 113(d)(5)(a). The applicability of the Act's coal conversion provisions is not as broad as the Commerce Committee Report had recommended. Contained in H.R. 6161 as adopted by the House was a provision permitting compliance date extensions to coal burning sources (subject to an FEA order not to switch to oil or natural gas) which had earlier intended to comply with emission standard by using oil or gas and had earlier received a variance or plan revision to do so. H.R. REP. NO. 294, 95th Cong., 1st Sess. 80 (1977). The Conference Report contains no indication as to why the House provision was rejected.
210. Pub. L. No. 95-95, § 112(a) 91 Stat. 706 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(A)), Clean Air Act § 113(d)(5)(A).
211. Pub. L. No. 95-95, § 112(a), 91 Stat. 707 (1977), (to be codified at 42 U.S.C. § 7413(d)(5)(B)), Clean Air Act § 113(5)(B). The Administrator is required to promulgate "emission limitation requirements respecting pollution characteristics of coal, or other enforceable measures" to assure the absence of pollutants in excess of the primary standard.
212. Pub. L. No. 95-95, § 112(a), 91 Stat. 707 (1977), (to be codified at 42 U.S.C. § 7413(d)(5)(D)(i)), Clean Air Act § 113(d)(5)(D)(i).
213. Pub. L. No. 95-95, § 112(a), 91 Stat. 707 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(D)(ii)), Clean Air Act § 113(d)(5)(D)(ii).
214. Pub. L. No. 95-95, § 112(a), 91 Stat. 707-08 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(D)(iii)), Clean Air Act § 113(d)(5)(D)(iii). The Commerce Committee Report notes that the rebuttable presumption as applied to the question of "regional of an air quality control region (see note 26, *supra*) provide an answer to those of an air quality control region (see note —, *supra*) provide an answer to those who contend that the "regional limitation" was overly strict without abolishing the concept altogether. H.R. REP. NO. 294, 95th Cong., 1st Sess. 80 (1977). The Senate had favored abolition of the "regional limitation" believing that the concept of primary standard could be preserved by permitting the States to establish the date for conversion. S. REP. NO. 127, 95th Cong., 1st Sess. 59 (1977).
215. Pub. L. No. 95-95, § 112(a), 91 Stat. 708 (1977) (to be codified at 42 U.S.C. § 7413(d)(7)), Clean Air Act § 113(d)(7).

assurance directed under the 1974 amendments,²¹⁶ that a source utilize the "best practicable system or systems of emission reduction."²¹⁷ Additionally, such sources must comply with any interim requirements, which the Administrator determines are "reasonable and practicable" including measures necessary to avoid endangerment to health²¹⁸ and a requirement that sources meet a state's implementation plan in so far as possible.²¹⁹ One standard setting requirement of the 1974 amendments was deleted by the repeal of the provision preventing conversion in cases where emissions of a noncritical pollutant could cause risk to public health.²²⁰

A major question involves the standard to which a plant converting to coal and receiving a delayed compliance order under Section 113 must adhere upon the expiration of such an order. Under the 1974 amendments, the Administrator was directed to promulgate regulations requiring a source with a compliance date extension to submit for approval its means and schedule for compliance with "the most stringent degree of emission reduction that . . . would have been required . . . under the applicable implementation plan . . . in effect on the date of submittal" of its plan for compliance.²²¹ While the House passed bill would have required sources with compliance date extensions to meet emission standards in effect on the date of final compliance (rather than those in effect at the date of issuance of the compliance date extension), the Senate measure contained no such provision.²²² While, the specific language of the 1974 amendments establishing the implementation plan with which a source receiving a compli-

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216. Pub. L. No. 95-95, § 112(a), 91 Stat. 708 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(B)), Clean Air Act § 113(d)(5)(B).
217. Such a standard is to be determined by the Administrator taking into account the regulations with which the source must eventually comply. Pub. L. No. 95-95, § 112(a), 91 Stat. 708 (1977) (to be codified at 42 U.S.C. § 7413(d)(7)), Clean Air Act § 113(d)(7). The Act contains no definition of the phrase "best practicable system of emission reduction."
218. Pub. L. No. 95-95, § 112(a), 91 Stat. 708 (1977) (to be codified at 42 U.S.C. § 7413(d)(7)), Clean Air Act § 113(d)(7). A similar standard existed under ESECA. Section 119(b)(3)(B), 42 U.S.C. § 1857c-10(b)(3)(B) (Supp. V 1975).
219. Pub. L. No. 95-95, § 112(a), 91 Stat. 708 (1977) (to be codified at 42 U.S.C. § 7413(d)(7)), Clean Air Act § 113(d)(7).
220. The Congress may have felt that sufficient protection was provided by Section 113(d)(7)(A). Others may not feel similarly disposed. See Ayres, *Enforcement of Air Pollution Controls on Stationary Sources Under the Clean Air Act Amendments of 1970*, 4 ECOLOGY L.Q. 441, 447-448 (1975).
221. Section 119(c)(2)(B) and (C), 42 U.S.C. § 1857 (1970). As noted above, such compliance was to be achieved as soon as practicable but not later than December 31, 1978.
222. H.R. REP. NO. 294, 95th Cong., 1st Sess. 80 (1977); S. REP. NO. 127, 95th Cong., 1st Sess. 58-60 (1977).

ance date extension would need to comply was repealed,²²³ no language was substituted therefore. Additionally, no discussion of this matter was contained within the Statement of the Managers,²²⁴ apparently leaving the issue unresolved.

Thus, a source which converts to the use of coal and receives a delayed compliance order is exempted from the application of a State Implementation Plan and must meet only the national primary ambient air standard. However, if the source is located in an area which has not attained the primary standard, it will be required to meet the state plan except under certain limited circumstances.²²⁵ On the expiration of the delayed compliance order, the source would then be required to meet the State Implementation Plan.

Under the 1977 amendments, the State Implementation Plan for clean air areas must utilize the concept of best available control technology for new sources. In most cases this will necessitate a floor of hazardous or new source performance standards.²²⁶ For a new fossil fuel-fired source such a floor would necessitate the use of a percentage emission reduction to be achieved through the application of the best technological system, and thus the eventual use of scrubbers.²²⁷ However, a source converting to the use of coal is expressly exempted from the application of the new source performance standards by a provision declaring a conversion to coal not to be a modification.²²⁸ Thus, such a source could

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223. Pub. L. No. 95-95, § 112(b)(1), 91 Stat. 685 (1977) (to be codified at 42 U.S.C. § 1857 c-10, 15 U.S.C. § 792). The entire section 119 was repealed with mostly new language in its place in Section 113. The provisions of the Clean Air Act Amendments of 1977 concerning coal conversion were clearly drafted with enactment of national coal conversion legislation in mind. 123 CONG. REC. H8663 (daily ed. Aug. 4, 1977).
224. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 134-35 (1977). While most aspects of legislative history are well and carefully documented (Committee hearings, mark-ups, and Reports, floor debates and amendments, Conference Reports, subsequent floor debate and final adoption) perhaps the most important part of legislative history, the conference itself, too often goes unrecorded. While the Statement of the Managers, as part of the Conference Report, contains, to a large extent, the basis for the final resolution of differences between the House and Senate bills, many agreements go unmentioned and the intent and objective of the Conference—as reached often after hours of discussion and debate—never see the light of day. Despite the controversy surrounding the Clean Air Act of 1977 and despite the importance of the rationale behind much of its final language—no transcript was taken during the Conference.
225. Pub. L. No. 95-95, § 112(a), 91 Stat. 706 (1977) (to be codified at 42 U.S.C. § 7413(d)(5)(D)), Clean Air Act § 113(d)(5)(D).
226. Pub. L. No. 95-95, § 169, 91 Stat. 741 (1977) (to be codified at 42 U.S.C. § 7479 (3)), Clean Air Act § 169(3).
227. Pub. L. No. 95-95, § 109(c), 91 Stat. 700 (1977) (to be codified at 42 U.S.C. § 7411(a)(1)(A)), Clean Air Act § 111(a)(1)(A).
228. Pub. L. No. 95-95, § 109(f), 91 Stat. 703 (1977) (to be codified at 42 U.S.C. § 7411(a)(7)), Clean Air Act § 111(a)(7). While Section 111(a)(7) contains language

meet the requirements of a state's implementation plan by the use of low sulfur coal alone.

Local Coal

The exclusion of coal conversion from the application of new source performance standards and the limitation of percentage emission reduction requirements to new sources,

exempting from the definition of "modification", and thus the application of new source performance standards, an argument could be made that construction associated with a conversion to coal (under certain specific circumstances), subjects the source to a state's "preconstruction requirements" as delineated under Section 165 given the phrase "no major emitting facility on which construction is commenced." Section 165(a). However, such an interpretation does not appear to be in keeping with the intent of the Senate Environment and Public Works Committee, (the origin of the final language of Section 111(a)(7)) given the following dialogue from Committee mark-up:

Mr. Cummings. The first implication of that is that a converted power plant does not become a new source subject to the new source standards of performance just by burning coal. The nondeterioration provision uses the phrase 'no major emitting facility on which construction is commenced may be constructed'. It is a preconstruction review.

This question was never fully resolved last year. I do not believe, however, it covers a conversion where the conversion involves the use of ready capability to burn coal. If the conversion involved the construction of additional capacity, additional facility which would otherwise be subject to this, that new construction may subject it to the nondeterioration provision.

Senator McClure. What do you mean "new facilities" or "additional facilities"?

Mr. Yago (Staff Director). You mean extension of the capacity of the new plant.

Senator McClure. You are going to have to have coal handling facilities and a coal storage yard. Those are new facilities.

Mr. Cummings (Associate Counsel). But unless those facilities are major emitting facilities themselves, subject to the nondeterioration provision, the facility as a whole in its conversion to coal would not be subject to the nondeterioration requirements. And I think the same analysis is going to be true for nonattainment, since we depend on that definition.

Unpublished hearings before Committee on Environment and Public Works on mark-up of Clean Air Act Amendments of 1977, p. 395 (March 29, 1977).

Thus, to what extent sources converting to coal in accordance with Section 113 will be required to meet the pre-construction and permit requirements of Sections 165 and 173 is unclear.

Arguably, the point could be made—as Mr. Cummings did during Senate mark-up—that to fall under such review the portion of the plant modified would need to be a major source in and of itself. Clearly, sources converting to coal were excluded from the application of NSPS under Section 111 in order to facilitate such conversion. Is it not likely that the Congress intended a similarly-based exemption from preconstruction review?

In clean air areas, specific exemption from PSD increment requirement is permitted for sources converting to coal under Section 113.

However, in nonattainment areas, sources converting to coal may be required to meet preconstruction permit requirements given the definition of "modification" under Section 171(4). Since that section utilizes the same definition for modification as used under Section 111(a)(4), it appears to exclude the application of Section 111(a)(7) (declaring a conversion to coal not to be a modification) from the nonattainment provision.

Senator Muskie could have been referring to this language when, in discussing the Conference Report, he noted:

A source—including an existing facility ordered to convert to coal—is subject to all the nonattainment requirements as a modified source if it makes any physical change which increases the amount of any air pollutant for which the standards in the area are exceeded.

123 CONG. REC. S13702 (daily ed. Aug. 4, 1977). However, since Section 111(1)(a)(7) states that conversion to coal is deemed not to be a modification for purposes

created a gap relative to the stated objective of the House Commerce Committee—the protection of local coal.²²⁹ It was a gap discerned early on and one which the Administration and numerous Senators and Congressmen quickly sought to fill. On April 18, 1977, in his appearance before the Subcommittee on Health and the Environment of the House Interstate and Foreign Commerce Committee, Douglas M. Costle, Administrator of the Environmental Protection Agency left his prepared text to state:

I would like to talk for a minute about a problem that we are having with existing sources coming in compliance and specifically existing coal-burning sources.

I am greatly concerned with the regional economic disruption that may result from some of our environmental regulations. As you are aware, the pollution control decisions made by certain electric power companies have tended to rely on low sulfur coal brought in from other regions rather than use of locally mined higher sulfur with the necessary control technologies. The resulting boomtown effect in the coal regions and loss of mining jobs in high sulfur regions are unacceptable and should be viewed as unacceptable by the Congress. I believe measures should be adopted to encourage the greatest use of locally available energy resources. States could adopt regulatory measures to require and encourage use of control equipment with locally available coal.

Congress may also wish to consider actions which would allow EPA or the States to constrain the choice of compliance options so as to lessen possible adverse employment effects. This is a difficult problem to cope with, and I do not know exactly what action is appropriate at the Federal level. I would like to work with you, though, to find a solution which would avoid jobs being threatened this way by companies applying pressure for relaxation of environmental regulations.²³⁰

of both Sections 111(a)(2) and 111(a)(4) then Section 171(4), by including 111(a)(4) seems to include 111(a)(7). There is no discussion of this matter in the Conference Report.

229. Section 111(a)(1) and (7). H.R. REP. NO. 294, 95th Cong., 1st Sess. 183-187 (1977).

230. *Clean Air Act Amendments of 1977: Hearings on H.R. 4151, H.R. 4758, and H.R. 4444 before the Subcomm. on Health and the Environment of the House Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess. 1684-85 (1977).*

While no amendment was adopted by the Subcommittee or during full Commerce Committee mark-up, Chairman Rogers, on May 25th, offered such an amendment entitled: "Measures to Prevent Economic Disruption or Unemployment".²³¹ Under the amendment as introduced, in order to prevent severe local or regional economic disruption or unemployment, the state, EPA Administrator or the President could order any major fuel burning stationary source²³² not in compliance with an implementation plan or under a coal conversion order to use locally available coal. Under such orders, a source could be required to enter into long-term contracts for the purchase of such coal, to enter into contracts for additional pollution controls, and to meet applicable standards of the Clean Air Act.²³³ After an abbreviated debate,²³⁴ the amendment was adopted without objection by a voice vote.²³⁵

While the House adoption of the local coal amendment proceeded quickly and without objection, the scene was markedly different on the floor of the Senate.²³⁶ On Friday, June 10th, a few hours prior to the final adoption of S. 252—the Clean Air Act Amendments—Senator Howard Metzenbaum²³⁷ called up a local coal amendment almost identical to

231. 123 CONG. REC. H5026 (daily ed. May 25, 1977).

232. Defined as a source with a design capacity of 100 million Btu per hour. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 144 (1977).

233. 123 CONG. REC. H5026-5027 (daily ed. May 25, 1977); H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 144 (1977).

234. 123 CONG. REC. H5027 (daily ed. May 25, 1977). Congressman Edward R. Madigan entered into a dialogue with Congressman Paul G. Rogers in an effort to ascertain the true impact of the amendment which Rogers had described as necessary to prevent serious economic disruption:

Mr. Rogers. For instance, a utility may decide it is going to go out of the State to get the lower sulfur coal, and this would allow the state or the Administrator to require the utility to use coal right close to that utility. In this way, we do not have to use energy to transport the coal across the country.

Mr. Madigan. I assume that the local coal or original coal would be higher sulfur coal.

Mr. Rogers. It may be. I think that generally would be true.

Mr. Madigan. Is the gentleman then saying that he would allow them to use that or that he would mandate them to use that?

Mr. Rogers. This is an authorizing provision, not a mandatory provision. It is for those exceptional circumstances where people are losing jobs, and there would have to be a finding that this requirement would help get back those jobs.

123 CONG. REC. H5027 (daily ed. May 25, 1977).

235. *Id.*

236. As in the House, the local coal provision was adopted not by the Committee, but as an amendment offered on the floor after the completion of committee consideration.

237. Senator Metzenbaum was joined in his efforts by co-sponsorship from Senator Jennings Randolph, Chairman of the Senate Environment and Public Works Committee, Senator Birch Bayh and Senator John Heinz. 123 CONG. REC. S9449 (daily ed. June 10, 1977).

the provision adopted sixteen days before by the House.²³⁸ However, unlike the quiet and unanimous approval given by the House, Senate debate over the Metzenbaum effort was lengthy, heated and divisive. For nearly three hours, the Senate battled over the objective and impact of a local coal amendment to the Clean Air Act.

Proponents contended that the measure was necessary to prevent unemployment among eastern miners and its resultant disruption and dislocation. Citing a need to increase use of coal nationally, Metzenbaum and others argued that the first step in that direction was to make use of already underutilized eastern coal.²³⁹ Additionally, the amendment was praised as a means of assuring to eastern consumers a lower cost of electricity by eliminating the need for transportation to the east of western low sulfur coal.²⁴⁰

²³⁸. The Metzenbaum amendment differed from the House provision in that while under the House bill the Governor, Administrator of EPA or President could issue the operative order in the Metzenbaum version only the President or EPA Administrator could do so. Additionally, the House amendment was applicable to those fuel burning stationary sources with a design capacity of 100 million Btu per hour while the Senate figure was 250 million Btu per hour. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 144-45 (1977). 123 CONG. REC. S9449 (daily ed. June 10, 1977), 123 CONG. REC. H5026-5027 (daily ed. May 25, 1977). The discussion contained within the Conference Report as to the nature of the Senate and House differences is somewhat imprecise. The exact phraseology of the amendments is contained in the Record.

²³⁹. The Carter Administration's position on this issue while seen earliest in the statement of EPA Administrator Costle before the Subcommittee on Health and the Environment of the House of Representatives (*see* note 101, *supra*) was restated in the National Energy Plan:

Coal development and production is most economical when it is near major markets. Although coal production will expand in many areas, there should be large production increases in the highly populated Eastern and Mid-West regions, where coal use in industry and utilities could grow considerably in the future. The required use of best available control technology for new power plants should stimulate even greater use of high sulfur Mid-Western and Eastern coals.

EXECUTIVE OFFICE OF THE PRESIDENT, THE NATIONAL ENERGY PLAN 65 (1977).

A more recent reaffirmation of that position was contained within a speech delivered by Secretary of the Interior Cecil Andrus:

While I have been talking about federal coal, I recognize that the bulk of coal production in this country has come, and will continue to come, from private and state lands and not from federal lands. Most of it will come from the Eastern and Middle Western states, and not from the Western states.

Remarks of Cecil D. Andrus, Secretary of the Interior, at the Fourth Annual Coal Conference and Exposition, Louisville, Kentucky (Oct. 18, 1977).

²⁴⁰. A point subject to serious question. *See* debate 123 CONG. REC. S9449-9460 (daily ed. June 10, 1977). While not explicitly stated in the House Commerce Committee Report, at least part of the rationale for the adoption of its new source performance standards was the belief that many Eastern and Mid-western utilities utilizing low sulfur Western coal were doing so only in an effort to "whipsaw" the American people into a reduction of emission standards. Such an effort apparently had the following scenario: the utility would claim an inability to meet present sulfur dioxide standards without use of scrubbers which were too expensive, the utility then would shift to the use of low sulfur Western coal. Eastern mines would close and miners would become unemployed. Consumers would pay higher utility bills since transportation costs associated with Western coal would be passed on

Opponents, on the other hand, contended that such a provision did not belong in a clean air measure, was the first step on the road to economic balkanization, was unnecessary, given the need to double coal production, went beyond the traditional Senate approach of requiring a standard rather than legislating a technology, and required utilization of a technology of questionable efficacy and supply.²⁴¹

Despite the opposition to the Metzenbaum amendment by the vast majority of the members of the Senate Environment and Public Works Committee,²⁴² the amendment was adopted by a vote of 45-44.²⁴³ However, an amendment was subsequently adopted requiring the issuing authority to take into account the final cost to the consumer of such an order prior to its issuance.²⁴⁴

The Conference Committee agreed upon the House revision of the local coal provision with certain amendments: coal was expanded to include not only locally available coal, but also petroleum products, natural gas or a combination; an order under the Act could be issued by the Governor, with written consent of the President; by the President's designee with the written consent of the Governor; or by the President, the Senate provision requiring that cost be taken into account

through the fuel adjustment clause. More Western coal would be stripped in the West causing concern to environmental groups. All four groups: mine operators, miners, utility customers and environmental organization would bring pressure on the Congress for a change in the national standard. The word "Whipsaw" was used in an "open letter to Congress from Arnold Miller," President of the United Mine-workers of America, March, 1974.

For another view of the origins of the local coal concern see 123 CONG. REC. S9450 (daily ed. June 10, 1977) where Senator Domenici states that it was the result of "an erroneous sulfur regulation that was put on by the State." *Id.*

That the House new source standards and the local coal amendment had strong regional economic basis appears clear from the following Mailgram received by Energy Conferees in late October 1977:

We have just opened our coal mine in Southeastern Ohio after closing in 1972. We had been in operation since 1891. We have 20 million tons of high 14,000 per pound Btu, 2.45 sulphur and 6 percent ash steamed coal. AEP owns a mine in Price, Utah and transportation costs to Ohio are \$17 a ton. It is imperative that you stand behind the bill which gives authority to order public utilities to use local coal when available. We have 14 power plants within 55 miles of our mine. It is common sense that the consumer will benefit. This is important to mine owners as well as the workers. Not only for Ohio but majority of Eastern coal.

241. *Id.*

242. Senate Environment and Public Works Committee members in favor of the Metzenbaum amendment: Senators John Culver, Daniel Moynihan, and Jennings Randolph; opposed: Senators Howard Baker, Lloyd Bentsen, Quentin Burdick, Pete Domenici, Mike Gravel, Gary Hart, James McClure, Edmund Muskie, Robert Stafford, Malcolm Wallop; not voting: Senators Wendell Anderson and John Chafee.

243. 123 CONG. REC. S9459 (daily ed. June 10, 1977). On a rollcall vote on a tabling motion moments after the initial vote, the amendment was again successful; this time by a vote of 43-42. *Id.* at 9459-9460.

244. *Id.* at S9468. The modifying amendment was offered by Senator Domenici.

was retained as was the Senate definition of a "major fuel burning stationary source"—that is 250 million Btu per hour.²⁴⁵

245. H.R. CONF. REP. NO. 564, 95th Cong., 1st Sess. 145 (1977). Pub. L. No. 95-95, § 122, 91 Stat. 722-23 (1977) (to be codified at 42 U.S.C. § 7425) Clean Air Act § 125. Section 125(e) states that any action required to be taken under Section 125 does not constitute a modification under Section 111(a)(2) and (4), apparently excluding sources receiving orders under Section 125 from the preconstruction and review permits. However, for a discussion of the uncertainty surrounding this matter see *supra* 228.

On September 8, 1977, Senator Clifford Hansen introduced an amendment to S. 977, the Natural Gas and Petroleum Conservation and Coal Utilization Policy Act of 1977, the coal conversion portion of the President's National Energy Plan, which would have repealed Section 125 of the Clean Air Act—the local coal provision. Although successfully adopted by the Senate by a vote of 47-44, (the vote was actually on a tabling motion by Senator Metzenbaum which was defeated), the amendment was ruled non-germane on a point of order made by Senator Metzenbaum. 123 CONG. REC. S14378-14382 (daily ed. Sept. 8, 1977).

Five days later, Senator Hansen again introduced an amendment effectively repealing Section 125, this time to the National Energy Conservation Policy Act, S. 2057, the energy conservation portion of President Carter's National Energy Plan. Successful by a vote of 43-39 (again the vote was on a tabling motion) the amendment, not subject to procedural challenges, was carried on to Conference. 123 CONG. REC. S14772-14775 (daily ed. Sept. 13, 1977). During consideration by the Energy Conference, the repeal of the local coal provision was the matter of lengthy and at times bitter debate. After two days of consideration, Conferees agreed on final language:

CONSERVATION OF COAL RESOURCES

House acceded to the Senate language. Part A of Title I of the Energy Policy and Conservation Act is amended by adding at the end thereof a new section as follows:

(a) No Governor of a State may issue to any major fuel burning stationary source (or class or category thereof), any order or rule pursuant to section 125 of the Clean Air Act, as amended—

- “(1) prohibiting such source from using fuels other than, or
- “(2) requiring such source to enter into a contract (or contracts) for supplies of, locally or regionally available coal or coal derivatives.

(b) (1) The Governor of any State may petition the President to exercise the President's authorities pursuant to section 125 of the Clean Air Act, as amended, with respect to any major fuel burning stationary source located in such state.

- “(2) Such petition shall include documentation which could support a finding that significant local or regional economic disruption or unemployment would result from use by such source of—

- “(A) coal or coal derivatives other than locally or regionally available coal,
- “(B) petroleum products,
- “(C) natural gas, or
- “(D) any combination of fuels referred to in (A) through (C), to comply with the requirements of a state implementation plan pursuant to section 110 of the Clean Air Act.

(c) Within 90 days after the submission of a Governor's petition, the President shall either issue an order or rule pursuant to section 125 of the Clean Air Act or deny such petition, stating in writing his reasons for such denial. In making his determination to issue such an order or rule pursuant to this paragraph, the President must find that such order or rule would:

- “(1) be consistent with section 125 of the Clean Air Act, as amended;
- “(2) result in no significant increase in the consumption of energy;
- “(3) not subject the ultimate consumer to significantly higher energy costs; and
- “(4) not violate any contractual relationship between such source and any supplier or transporter of fuel to such source;

(d) Nothing in subsection (a) or (b) of this section shall affect the authority of the President or the Secretary of Energy to allocate coal or coal derivatives under any provision of any other law.

(e) The terms "major fuel burning stationary source (or class or cate-

gory thereof" and "locally or regionally available coal or coal derivatives" shall have the meanings assigned to them for the purposes of section 125 of the Clean Air Act, as amended.

As important as the language to which the Conferees agreed is their objective as expressed during the Conference itself. What appears clear from the discussion preceding adoption of final language is the intent of the Energy Conferees that any action taken under Section 125 should be taken in accordance with the amendment as adopted by the Conference.

After an initial discussion of the Hansen repealer amendment, Senator J. Bennett Johnston offered a Senate compromise:

Senator Johnston. The Senator from Ohio (Senator Metzenbaum) has stated first of all that this action would save energy by saving the transportation costs of the coal from the West, and secondly he stated that it would be helpful to the consumers, and third that this action cannot be taken where contracts are being violated.

So I'm wondering if we could put in language like this, stating that an action ordered or ruled under A or B of section 107A or B that's in the Senate bill, shall not be taken or issued, unless it is consistent with the Clean Air Amendments of 1977.

And, unless the President finds one, that such action will significantly conserve energy, and two, that consumers in such area and state shall not be subjected to significantly higher fuel or other consumer costs. And three, that no contractual arrangement between such coal users, coal supplier, or coal transporter, will be affected or altered without the payment of just compensation.

An action order or rule under A or B, shall not be taken or issued unless it is consistent with the Clean Air Act amendment of 1977, and unless the President finds one, that such action will significantly conserve energy, and two, that consumers in such area and state shall not be subjected to significantly higher fuel or other consumer costs.

And three, that contractual relationship will seem between such coal user, coal supplier, or coal transporter, will be unaffected or altered, without the payment of just compensation.

So that in effect, if there is no contractual relationship to be altered, as the Senator suggested, that this were not applicable when there is such a contract, then this would not be adding anything additional.

Unpublished transcript of Senate-House Energy Conference, pp. 859-860 (Oct. 26, 1977).

Senator Johnston subsequently amended his proposal:

Mr. Chairman, the next item on my list here is the so-called Hansen coal amendment.

You will recall that yesterday we had discussions about a compromise which I had proposed. Since that time the staff has worked with Senator Metzenbaum, who led the fight against the Hansen amendment on our side, together with Senator Hansen and together with some of the rest of the staff, and in consultation I think with some of the House staff, and we have come up with an amendment which is unanimously supported on this side.

What this amendment does is very much similar to that amendment which we ended up with yesterday.

It provides that the President must make three findings before implementing the requirement of purchase of local coal, three new findings.

First, that there is no significant increase in the consumption of energy;

Secondly, that it will not subject the ultimate consumer to significantly higher energy costs; and

Third, that it would not violate any contractual relationship between such source.

Senator Johnston further explained the nature and intent of the amendment.

Essentially what it does is it provides that before the power contained in the Clean Air Act amendment, Section 125, can be invoked that the President must make three findings. Those three findings are, first, that it will not result in a significant increase in the consumption of energy; second, it will not subject the ultimate consumer to significantly higher energy costs; and, third, it will not violate any contractual relationship between such source and any supplier or transporter of fuel to such source.

Unpublished transcript of Senate-House Energy Conference, pp. 946-947, 963 (Oct. 27, 1977).

Prior to a vote on the Senate proposal, Congressman Dingell offered a proposal to which the House Conferees agreed and submitted to the Senate conferees.

While Senate efforts, in late 1977, to repeal Section 125 of the Clean Air Act remain unresolved,²⁴⁶ what is not subject to question is the nature and applicability of the BACT requirement, NSPS and the local coal amendment. The impact of all of these provisions is uncertain, but if early discussions are any indication, the ramifications will have national significance.

According to an Environmental Protection Agency study completed in early 1976, Senate-House proposals, while not preventing the construction of any new coal-fired power plants, would in fact increase the electric utility industry's capital requirements by approximately twelve billion dollars over a fifteen year period.²⁴⁷ Additionally, the average residential customer's yearly expenditure for electricity would increase in 1990 by nearly thirty dollars a year. Use of scrubbers as mandated for new sources would require the construction of another 3,300 megawatts of coal-fired capacity by 1990 and necessitate the burning of an additional 7.9 million tons of coal to offset the energy utilized in the operation of the scrubbers.²⁴⁸

Subsequently, Congressman Dingell offered another compromise which adopted by the House conferees was rejected again by the Senate:

Senator Johnston. Let me say this, Mr. Chairman, that perhaps the fault of the Senate was sort of laying out our cards too quickly from the bargaining standpoint. See, the Senate started off with in an effect a repealer of that provision. That's what passed on the Senate floor and in effect two or three times.

And we quickly in the spirit of compromise we're backing off of that. I started out with some language requiring three findings yesterday that the President must find that it would significantly conserve energy. There were objections to that and we changed that "would significantly conserve" to "that it would not significantly increase".

There's a world of difference between those two provisions. Secondly, we originally started with that consumers would not be subject to higher fuel or other consumer costs. We added to that "significantly higher fuel costs" and we struck "other consumer costs". And by doing so make that provision not applicable to anything but an electric generating power plant in effect.

Third, with respect to the contractual relationship we struck—at the suggestion of the House—the provisions with respect to just compensation. So what we've got is a very tightly drawn exclusion.

Id. at 1004-1005.

It was this compromise which the House and the full Conference accepted. *Id.*

For a discussion of the pre-Conference activities relative to the repeal of the local coal amendment, see Kirschten, "Watch Out! The Great Coal Rush Has Started", *National J.*, Oct. 29, 1977, p. 1683. See also *Wall Street J.*, Oct. 24, 1977, p. 1.

246. As of this writing, the Senate-House Conference on the National Energy Plan has not resolved the taxation and natural gas portions of that legislation. Since House Conferees agreed not to take action on adoption of the Conference Report until completion of all portions of the Energy Plan, the energy conservation portion and its local coal amendment must await resolution of the two final issues.
247. ENVIRONMENTAL PROTECTION AGENCY, A PRELIMINARY ANALYSIS OF THE ECONOMIC IMPACT ON THE ELECTRIC UTILITY INDUSTRY OF ALTERNATIVE APPROACHES TO SIGNIFICANT DETERIORATION I-2 (Feb. 5, 1976).
248. *Id.* at I-3.

According to EPA projections, required use of scrubbers will decrease the demand for Western coal by approximately thirty-five million tons in 1990 while increasing the demand for Mid-western coal by twenty-five million tons.²⁴⁹

On the other side of the regulatory coin, an industrial study of the proposed Clean Air Act Amendments of 1977, contends that a scrubber requirement on all new coal-fired electric generating plants will result in capital requirements of \$22.5 billion from 1975-1985.²⁵⁰ Additionally, the study points out that since two-thirds of the electricity is consumed by the industrial and commercial sections, the total impact on the average household of the scrubber requirement would be ninety-two dollars in 1985.²⁵¹ It is projected as well that Western coal production could decrease by 175 million tons a year in 1990 with Eastern and Midwestern coal production increasing by about twenty-five million tons.²⁵²

As to which estimate regarding the future of Western coal is correct, there can certainly be reasonable question. However, it would appear that some reduction is inevitable given the near unanimity of the experts. According to a report by the Federal Energy Administration "these measures (BACT for new sources and the local coal provision) could cost Western coal much of its Eastern market and could also shift some Southwestern consumption from Wyoming to New Mexico coal."²⁵³ A recent study by the Library of Congress notes "[t]his condition [the ability of Western low sulfur coal to penetrate markets as distant as 1300 miles from its point of origin] could very likely change with the requirement that utilities clean all stack gases, regardless of the sulfur content of the coal being burned."²⁵⁴ One investment observer states

249. *Id.*

250. ATLANTIC RICHFIELD CO., PROPOSED CLEAN AIR ACT AMENDMENTS OF 1977 IMPACT ON COAL DEVELOPMENT 27 (May 1977).

251. *Id.*

252. *Id.*; see also HINMAN, AIR QUALITY AND ENERGY DEVELOPMENT IN THE ROCKY MOUNTAIN WEST UC-11 (1977); GENERAL ELECTRIC CO., AN EVALUATION OF ADDITIONAL PRODUCTION COSTS FOR SIGNIFICANT DETERIORATION AND BEST AVAILABLE CONTROL TECHNOLOGY PROPOSALS (1976). The House Commerce Committee Report contains a list of other such studies at H.R. REP. NO. 294, 95th Cong., 1st Sess. 174-77 (1977).

253. FEDERAL ENERGY ADMINISTRATION, WESTERN COAL DEVELOPMENT MONITORING SYSTEM—SUMMER QUARTER, (FEA/G-77/306), p. 2 (1977).

254. Thompson, *Advantages and Disadvantages of Developing Western Coal*, CRS-13 Library of Congress, Congressional Research Service (Oct. 1977). According to the Office of Technology Assessment: "Penetration of Western coal into Eastern markets . . . is highly dependent on transportation costs and on the requirement of best available control technology. BACT and high transportation costs tend to re-

"[w]e are less bullish about Western coal largely because of Carter administration policies and the impact of new clean-air regulations."²⁵⁵

A reduction in the utilization and development of Western coal casts serious doubt on the ability of the nation to achieve President Carter's 1985 objective of 1.2 billion tons of coal. According to one study, if Western coal markets were reduced by environmental requirements, "Appalachian producers would probably be unable to augment mine and expansion plans to offset reduced Western coal production."²⁵⁶ Projected manpower shortages, increased labor unrest and augmented requirements under the Mine Health Safety Act of 1977 are a few of the reasons for possible production problems regarding Eastern coal.²⁵⁷ If the nation is to reach the coal production goals as established by the President, then it would appear that such development need take place jointly and coherently.²⁵⁸

Yet as significant as is the impact of the Clean Air Act upon the development of our nation's coal, of even more importance—both now and for the future—is the economics involved in the decisions made in the new source, local coal area.

While reasonable men may differ as to the exact cost to the consumer or the utility of certain of the Act's provisions, what is generally not subject to question is the balancing involved. As indicated in the EPA Study "additional expenditures must be balanced against the health and welfare benefits."²⁵⁹ This has traditionally been the language of the economist and the environmental lawyer—the marginal utility of the last unit of pollution removed. Such is reasonable—indeed we have few other tools.

duce the use of Western coal east of the Mississippi". OFFICE OF TECHNOLOGY ASSESSMENT, A TECHNOLOGY ASSESSMENT ON COAL SLURRY PIPELINES 50 (1978).

255. Mr. Joel Price of Dean Witter as quoted in *Business Week*, Nov. 28, 1977, p. 80.

256. PROPOSED CLEAN AIR ACT AMENDMENTS OF 1977 IMPACT ON COAL DEVELOPMENT, *supra* note 250, at 35.

257. Agnew, *Coal, Carter and Constraints*, Congressional Research Service, July 12, 1977, p. 8; GENERAL ACCOUNTING OFFICE, U.S. COAL DEVELOPMENT—PROMISES, UNCERTAINTIES, EMD 77-43, p. 4.11 (1977).

258. Such seems particularly the case given the delay in opening Western Mines. Agnew, *supra* note 257, at 13-16; GENERAL ACCOUNTING OFFICE, U.S. COAL DEVELOPMENT—PROMISES, UNCERTAINTIES, *supra* note 257, at P. 4.11.

259. ENVIRONMENTAL PROTECTION AGENCY, A PRELIMINARY ANALYSIS OF THE ECONOMIC IMPACT ON THE ELECTRIC UTILITY INDUSTRY OF ALTERNATIVE APPROACHES TO SIGNIFICANT DETERIORATION I-2 (1976).

Yet what is reflected in the New Source Performance Standards under the 1977 amendments is not the achievement of additional air quality utility by a requirement for the installation of scrubbers, but the protection of certain economies. Thus, the nation pays—through the cost of additional pollution requirements—not for a certain margin of clean air but for the coal mines in Ohio or Kentucky. While providing for that protection may be in the national interest, it should not be a part of a Clean Air Act or referred to as the attainment of higher clean air objectives, but for what it is—the pursuit of a new goal.²⁶⁰

CONCLUSION

While the determination of Congress, as manifested by the Clean Air Act Amendments of 1977, to prevent the significant deterioration of air quality is affirmed, and protection against visibility impairment is added, flexibility is provided for those areas laboring under the burdens of non-attainment. Thus, while Congress has sought to provide equity, it has not retreated from the fundamental goals of the 1970 Act, nor abandoned its basic control strategies, but actually sought to tighten and broaden national standards.

The Congressional approach to new source performance standards reflects, in particular, a tightening of such standards. While extending the coal conversion-delayed compliance authority in anticipation of the completion of the National Energy Plan legislation, the Amendments contain requirements and authority which could have a significant impact upon the development of the nation's coal resources. Unfortunately, these latter changes were made more in pursuit of the protection of local economies than clean air.

260. It remains to be seen whether this new goal will be achieved by the adoption of the new source performance standard and local coal provisions of the Clean Air Act Amendments of 1977. There are a number of factors which will weigh in such a decision—factors which fall beyond the scope of this article but which bear at least mention: (1) Will the regulatory quagmire which now necessitates from ten to thirteen years for the operation of a nuclear power plant be reduced to permit nuclear power to offer an attractive and economic alternative to utilities faced with the installation of scrubbers; (2) will the economies to be derived from the burning of low sulfur coal even with scrubbers offset the transportation costs of Western low sulfur coal; (3) Will the continuing labor unrest in the bituminous coal industry—high absenteeism, frequent wildcat strikes and weaknesses in the United Mine Workers make it politically impossible for a President to issue an order under Section 125 given the possibility that various utilities might run short or out of local coal for which they have the ordered long-term contracts during a winter of the severity of 1976-1977.

Thus, the Act reflects the ratcheting down against stationary sources that was surely intended—an effort to solidify and perfect the changes made in 1970 while expanding the Act's jurisdiction to new areas with new approaches for what is, in large part, the assurance of necessary levels of protection.

In the final analysis, an overview of the Act reveals an aura of uncertainty, both as to where the nation now stands and as to the impacts of what the Congress attempted with the 1977 Amendments.

There remain important unanswered questions; answers to which the Congress, the EPA and the states need in order to be certain of what really must be done and how it is to be accomplished. Aware of these deficiencies the Congress provided for numerous studies to shore up the informational gaps, at least for the future.²⁶¹

Closely associated with this informational uncertainty is a concern as to the impacts of what was accomplished in 1977. The Amendments are lengthy and complicated and will no doubt take years to be fully interpreted or understood. To the extent that the legislation is complex there are uncertainties, yet the doubt extends much further than a simple legislative, executive, or judicial declaration. Equal doubt exists as to the basic question: Have we done right?

It is too soon after the tris controversy for the Congress not to feel some uneasiness over the decisions made. Some members have misgivings about the changes and compromises made concerning mobile sources, variances, and transportation controls, particularly in light of questions over the existence of "safe" levels of pollutants. They must ask them-

261. The Clean Air Act Amendments of 1977 provide for the following studies to be conducted: Oxides of Nitrogen Study, Fine Particulate Study, Odor Study, Tissue Study, Gulf Coast Air Quality Study, Fuel Consumption Study, Environmental Adjustment Assistance Study, Sulfur Emission Study, National Academy of Sciences Study, Railroad Emission Study, Oxides of Nitrogen Emission Penalty Study, Economic Approaches to Pollution Control Study. Pub. L. No. 95-95, § 224(d), 91 Stat. 767 (1977) (to be codified at 42 U.S.C. § 7548), Clean Air Act § 214; Pub. L. No. 95-95, § 401, 91 Stat. 792-94 (1977) (to be codified at 42 U.S.C. § 7548), Clean Air Act § 403; Pub. L. No. 95-95, § 401, 91 Stat. 792-94 (1977) (to be codified at 42 U.S.C. § 7401), Clean Air Act § 404; Pub. L. No. 95-95, § 401, 91 Stat. 792-94 (1977) (to be codified at 42 U.S.C. § 7401) Clean Air Act § 405. Additional studies are to be conducted by the newly established National Commission on Air Quality. Pub. L. No. 95-95, § 313, 91 Stat. 785-89 (1977) (to be codified at 42 U.S.C. § 4623), Clean Air Act § 323.

selves if the health and welfare protection desired has been assured. Others wonder whether or not we have gone too far and handicapped, if not destroyed the ability of the nation to solve its energy problem, ease the nation's balance of payments difficulties and insure the stability of the dollar around the world. They must ask themselves if the states, industry and nation's work force can bear the price now asked.

Perhaps it is this that the Clean Air Act Amendments most reflect—realization of the continuing conflict between equally desirable goals.