EPA Bends to Industry Pressure on Coal NSPS—and Breaks

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INTRODUCTION

Policymakers have recently turned to the relatively abundant domestic coal supply1 to reduce U.S. reliance on imported oil and stabilize the price of energy.2 Many analysts expect coal to substitute for oil and gas until renewable energy sources are developed.3 Current coal production, however, is not as great as administration and industry officials would like.4

Several significant factors constrain coal use. Problems pervade


2. See, e.g., text accompanying notes 96-103 & 172 infra. In 1974, the United States consumed an average of 16.2 million barrels of oil per day (MBD), of which 38% was imported. In 1979, U.S. consumption reached approximately 18.5 MBD, of which 45% was imported. ENERGY FUTURE: REPORT OF THE ENERGY PROJECT AT THE HARVARD BUSINESS SCHOOL 18, Table 21 (R. Stobaugh & D. Yergin eds. 1979) [hereinafter cited as ENERGY FUTURE]. The consumer price index (CPI) increased 13.3% in 1979; energy prices, which account for 10.3% of the CPI, increased at a 41.6% average rate during 1979. What Keeps Inflation Going?, N.Y. Times, Jan. 26, 1980, § A, at 1, col. 1. See also Measuring Economic Pain Correctly, N.Y. Times, Jan. 26, 1980, § A, at 20, col. 1; Week in Business: Inflation Rages, Tax Cut is Off, N.Y. Times, Jan. 27, 1980, § 3, at 19, col. 1. The price of a barrel of imported oil was about $1 in 1969, ENERGY FUTURE, supra, at 25, $10-11 in 1974 after the 1973 Egypt-Israel war, id. at 27-28, $15 in early 1979 before the Iranian shutdown, id. at 9, and $26-35 in early 1980. EN. USERS REP. (BNA), Jan. 3, 1980, at 3 (1980 prices). See generally FORD FOUNDATION STUDY GROUP, supra note 1, at 185-222.

3. See ENERGY FUTURE, supra note 2, at 79-102; RESOURCES FOR THE FUTURE, ENERGY IN AMERICA'S FUTURE 483-92 (1979) [hereinafter cited as ENERGY IN AMERICA'S FUTURE]; FORD FOUNDATION STUDY GROUP, supra note 1, at 271-408.

Estimates of U.S. coal reserves vary widely, but most studies agree that available supplies could last at least one hundred years. ENERGY FUTURE, supra note 2, at 80-81; ENERGY IN AMERICA'S FUTURE, supra, at 225-28; FORD FOUNDATION STUDY GROUP, supra note 1, at 278.

4. President Carter's 1977 National Energy Plan called for an 80% increase in coal production between 1976 and 1985—from 680 million tons to 1.2 billion tons per year. EN. USERS REP. (BNA), Dec. 27, 1979, at 12. Production in 1978 fell to 623 million tons. Id. Production in 1979 rose to about 776.3 million tons, prompting the National Coal Association to issue a forecast of 825 million tons for 1980. EN. USERS REP. (BNA), Oct. 16, 1980,
extraction, transport, combustion, and waste disposal. The coal industry suffers from labor relations problems, uncertain federal regulations and coal leasing policies, and stagnant demand attributable in part to the problems of converting coal to liquid and gaseous fuels. Finally, Clean Air Act regulation of emissions from coal combustion is perceived to be a crucial constraint on coal use.

Regulatory constraints on coal have increased the price of energy. Higher energy prices have in turn contributed to the overall inflation rate. Although the extent to which government regulation increases energy prices and contributes to inflation is unknown, an antiregulation mood has emerged in response to both real and imagined costs of regulation. Pressure to ease the regulatory burdens on do-

at 11. The NEP forecast probably is unrealistic. See Energy Future, supra note 2, at 79-107.

6. For example, a crippling strike occurred in the winter of 1977-78. Id. at 94-97.
7. Id. at 81, 82-92.
8. Id. at 90; Major Decisions Near on Federal Leasing, Coal Age, Nov. 1978, at 11-13.
9. Energy Future, supra note 2, at 84-86.
10. See notes 168-71 infra and accompanying text.
11. For one estimate of the incremental cost to consumers of the 1979 New Source Performance Standard for sulfur dioxide emissions from coal-fired electric power plants, see text accompanying note 170 infra.
12. See note 2 supra.

An example of this antiregulation mood is the attention being paid to “regulatory reform” in Congress. Bills have been introduced in both Houses that are “intended to make the thousands of rules that Government agencies issue each year more sensitive to the costs that businesses incur in complying with them.” Regulatory Overhaul Bill Gains, N.Y. Times, Apr. 4, 1980, § D, at 1, col. 6. The Government Affairs subcommittee of the Senate Judiciary Committee and a subcommittee of the House Judiciary Committee have approved various versions of the “regulatory overhaul,” all of which require agencies to choose the least expensive regulatory option or explain why a more costly alternative was chosen. Id.

The most important aspect of these proposals is the “legislative veto,” which authorizes one or both Houses of Congress and the President to override agency rulemaking. Id., § D, at 5, col. 7. The depth of the antiregulation mood in Congress was revealed when the Federal Trade Commission reauthorization bill became the focus of a fight to weaken the FTC’s powers and a legislative veto was imposed on the Agency. Regulating Federal Regulations, N.Y. Times, May 28, 1980, § A, at 23, col. 1; Will F.T.C. Battle Inhibit Regulation?, N.Y. Times, May 22, 1980, § D, at 1, col. 3.

Another emerging concept in the antiregulation crusade is the “regulatory budget.” The Office of Management and Budget has drafted a bill that would require agencies to estimate the costs to industry and government of regulations. [1980] 11 Envr. Rep. (BNA) 38. EPA has expressed its concern that this accounting might lead to a budget for an agency’s regulatory activities, thus increasing inter and intra-agency competition for funds and threatening its regulatory programs. Id.

In the 1980 Presidential campaign President-elect Ronald Reagan offered his own program to combat “too much” regulation. The program included regulatory budgets, legislative and executive vetoes, and sunset legislation, which would terminate regulatory
mestic energy production, especially coal production, has mounted steadily since 1977.14 Deregulation proponents argue, in essence, that while clean air may be nice, jobs and economic growth are essential.

This growing antiregulation campaign has precluded discussion of many critical issues. Moreover, it has gained momentum at a time when scientists are increasingly discovering evidence of serious health effects that may result from air pollution.15 Most important are findings that even trace amounts of some air pollutants can be harmful.16 Thus, the basic assumption underlying federal regulation of air pollution—that there is a threshold level of pollution below which human health is not threatened—is false.17

The 1977 amendments to the Clean Air Act oblige utilities building new coal-fired power plants to reduce sulfur dioxide (SO₂) emissions from coal combustion to that level achievable through application of the best available control technology (BACT).18 Since the passage of the 1977 amendments, the Environmental Protection Agency (EPA) has been embroiled in a hotly contested argument between the coal industry, utilities, and other coal advocates on the one hand, and environmentalists on the other, concerning the extent of emission control that utilities should be required to achieve.

The energy crisis has made air pollution issues politically sensitive, particularly in light of renewed interest in coal use. In 1977, Congress increased the opportunity for effective public participation in the establishment of Clean Air Act regulations. Unlike the informal rulemaking procedures in effect prior to 1977,19 the amendments' detailed procedural safeguards,20 which are capable of reducing litigation and legitimizing compromise decisions, greatly exceed Administrative Procedure Act requirements.21 Section 307(d) requires EPA to follow procedures

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15. See part II infra.
16. FORD FOUNDATION STUDY GROUP, supra note 1, at 344-46, 367-68.
17. See text accompanying notes 58-61 infra.
that will increase the Agency's accountability to the public and the courts during its sensitive standard-setting proceedings.\textsuperscript{22}

This Article will examine whether one of EPA's actions pursuant to the 1977 amendments can be justified in light of Congress' twin concerns of reduced emissions and increased citizen involvement in air pollution regulation. On June 11, 1979, EPA promulgated a New Source Performance Standard (NSPS) for SO\textsubscript{2} emissions from coal-fired steam generating plants.\textsuperscript{23} Focusing on the process by which EPA set the standard, this Article will show that the revised NSPS suffers from severe procedural and substantive defects. EPA based the standard on Agency and industry data and analyses that were developed after the close of the public comment period. Thus, much of the information upon which the standard was based was never exposed to public scrutiny.\textsuperscript{24} The procedural sanctity of the proceeding was clouded further by certain ex parte communications between the Agency and coal industry advocates, including high-ranking administrative officials and Members of Congress.\textsuperscript{25} During the course of the standard setting, EPA reversed its position from a strong commitment to stringent control of sulfur emissions to the more moderate Department of Energy and utility-endorsed position that it had previously opposed.\textsuperscript{26} The new standard, which allows emission controls that remove far less sulfur than the best technologies can eliminate,\textsuperscript{27} violates congressional intent to require a stringent standard.\textsuperscript{28} By bending to industry pressures to weaken the NSPS, EPA has set a precedent that threatens to undermine the purpose of the Clean Air Act.

This Article begins with a discussion of the Clean Air Act strategy for new stationary sources. Second, congressional concern over deleterious health and other environmental impacts of coal's principal air pollutants will be treated. A third section will chronicle the events leading to EPA's promulgation of the final standard, relating the growing national concern with energy regulations to the rulemaking outcome. Fourth, the Article will analyze EPA's setting of the revised standard, including the Agency's denial of the request for reconsideration of the revised standard. The final section will relate the defects in

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\textsuperscript{22} See notes 205-10 \textit{infra} and accompanying text.
\textsuperscript{23} Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978, 40 C.F.R. §§ 60.40a-.49a (1979).
\textsuperscript{24} See notes 291-94 \textit{infra} and accompanying text. See also text accompanying note 135 \textit{infra}.
\textsuperscript{25} See text accompanying notes 132-53 \textit{infra}. See also text accompanying notes 216-45 \textit{infra}.
\textsuperscript{26} See text accompanying notes 118-21 & 156-59 \textit{infra}.
\textsuperscript{27} See text accompanying notes 351-69 \textit{infra}.
\textsuperscript{28} See text accompanying notes 323-43 \textit{infra}.
the Agency’s procedures to the substantive defects in the revised standard.

I

STATIONARY SOURCE CONTROL UNDER THE CLEAN AIR ACT

A. The Overall Strategy

In 1970, Congress asserted a substantial federal role in air pollution control. As part of its scheme for controlling air pollution through protection of ambient air quality, Congress gave EPA a strong mandate to set preemptive and nationally uniform emission standards for any new or substantially modified stationary pollution source.

The Clean Air Act of 1970 required EPA to establish categories of sources and to set standards of performance for new sources within each category. Prior to the 1977 amendments, standards were to reflect “the degree of emission limitation achievable through application of the best system of emission reduction which, taking into account the cost of achieving such reduction, the Administrator determines has been adequately demonstrated.” Emission limitations would be established for each pollutant deemed a significant contributor to air pollution. Congressional and EPA policymakers recognized the NSPS as an efficient, cost-effective, and fair method for achieving the 1975-77 ambient standards.

29. State emission control standards may not be less stringent than federal standards, although §116 of the Act specifically allows States to set more stringent standards than those set by EPA. 42 U.S.C. §7416 (Supp. II 1978).
31. Performance standards differ from specification standards. Specification standards specify measures that must be taken, such as the installation of catalytic converters on cars, while performance standards prescribe a level of performance that must be achieved and maintained, such as allowing a factory to emit 10 tons of pollutants daily. Performance standards are most attractive because, in the abstract, they leave polluters with the freedom to choose the most effective means of meeting performance standards. Congress created in the Clean Air Act Amendments of 1977 a hybrid between performance and specification standards which allows choice of the method of control, but does not allow reducing emissions only by burning low-sulfur coal. 42 U.S.C. §7411(a)(1) (Supp. II 1978).
32. A “new source” is “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.” 42 U.S.C. §7411(a)(2) (Supp. II 1978).
36. See FORD FOUNDATION STUDY GROUP, supra note 2, at 378.
The performance standards for coal plants under the 1970 Act, promulgated by EPA in December 1971, specified only the amount of SO\textsubscript{2} that could be emitted per unit of heat generated: 1.2 pounds per million British thermal units (BTU's). The standards thus left the method of compliance entirely up to the regulated source. As a result, coal-burning sources could often meet the 1971 standards without employing technological controls by burning low-sulfur coal. For this reason, between the early 1970's and EPA's adoption of the new NSPS for coal plants in 1979, industry made little progress in implementing or refining the state-of-the-art technological sulfur control system, flue gas desulfurization (FGD) or "scrubbing." Only a few dozen systems were operating or being built by 1979, and most of these were small demonstration units, governmentally funded units, or units built as part of a utility company's special compliance agreement with EPA.

EPA never eliminated the nontechnological option. Therefore, the nationally uniform NSPS emission ceiling allowed an advantage to those regions and sources that had access to coal with a sulfur content at or below 1.2 pounds per million BTU's. Eastern States, some Midwestern States, and sources that relied on local high-sulfur coal, on the other hand, were disadvantaged.

37. 36 Fed. Reg. 24,876 (1971) (codified at 40 C.F.R. § 60.43 (1979)).
38. Id. § 60.43(a)(2).
39. Because the 1971 NSPS does not require technological emission reduction, the source could use technological devices, fuel mix changes, or coal washing to meet the standard. See id.
41. FORD FOUNDATION STUDY GROUP, supra note 1, at 380. Flue gas desulfurization removes sulfur oxides from exhaust gases produced by combustion. The FGD system most widely used at present is "wet scrubbing," in which a limestone slurry is mixed with exhaust gases, removing SO\textsubscript{2} and producing a sulfur-bearing sludge. Rubin & Nguyen, Energy Requirements of a Limestone FGD System, 28 AIR POLLUTION CONT. A.J. 1207, 1207-08 (1978). A newer process known as "dry scrubbing" has also been developed in which dry reagents such as lime or sodium carbonate are sprayed into the exhaust gases and SO\textsubscript{2} is absorbed on the surface of the finely ground solids. Dry Scrubbing Key Question in Setting Electric Plant NSPS, [1979] 10 ENVIR. REP. (BNA) 4. See also note 293 infra.
42. FORD FOUNDATION STUDY GROUP, supra note 1, at 380.
43. EPA's decision on this matter was challenged. Between 1973 and 1975 the Oljato Chapter of the Navajo Tribe sought to require the EPA to order the installation of scrubbers on power plants in the Four Corners area. Their lawsuit ultimately failed for lack of jurisdiction in the district court under § 304(a)(2) and because plaintiff failed to satisfy the procedural requirements for review in the Court of Appeals under § 307(b)(1). Oljato Chapter of the Navajo Tribe v. Train, 515 F.2d 654 (D.C. Cir. 1975).
44. See ENERGY FUTURE, supra note 2, at 82-91; ENERGY IN AMERICA'S FUTURE, supra note 3, at 225-28 (1979). See generally ENERGY: THE NEXT TWENTY YEARS, supra note 2, at 284-87.
B. The 1977 Amendments

The legislative history of the Clean Air Act Amendments of 1977 indicates that the preamendment EPA standards failed to meet several of the purposes of the NSPS. According to the House report, the NSPS was intended to:

(1) insure that no state would have a competitive advantage in attracting new industry;
(2) reduce new source emissions as much as possible to maximize long-term economic growth;
(3) reduce long-term costs by forcing new plants to install all the control technology that they would ever need at the time of construction;
(4) encourage the burning of high-sulfur coal to expand available energy resources and free low-sulfur coal for use in existing facilities for which retrofitting would not be feasible;
(5) encourage the use of low-sulfur coal in older and smaller sources, prolonging their lives and preventing unemployment; and
(6) provide incentives for the development of improved technology through regularly revised standards.45

These concerns can be grouped into three broad categories: avoiding hardship or unfairness within the coal industry and among the States, reducing overall emissions, and providing incentives for technological improvements.46

The 1977 House report found that the 1971 NSPS undermined these purposes since the standards could be met through the uncontrolled combustion of low-sulfur coal.47 Therefore, the 1977 amendments made several important changes in the 1970 NSPS scheme. First, the standard must now include both an emission ceiling and a minimum percentage reduction for all types of coal.48 Second, the amendments expressly require a "technological system" of emission reduction49 to prevent any source from using untreated fuel to meet

46. See part V.A infra.
48. The new standard of performance must reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.
49. Id.
NSPS standards. Third, in determining the best available control technology, the Administrator must now consider "any nonair quality health and environmental impact" and any "energy requirements" as well as the cost of the control system.

In addition to making important substantive changes in the Act, Congress also added provisions to guarantee fairness in future EPA standard settings. Inspired by William F. Pedersen's article in the Yale Law Journal, Formal Records and Informal Rulemaking, section 307(d) represents a noteworthy effort to provide meaningful citizen participation in administrative decisionmaking.

This author believes that the 1977 amendments adequately clarified congressional intent concerning the interests of fairness, technological incentives, and emissions reduction that underlie the NSPS program. It is the author's view, however, that EPA violated the procedural safeguards of section 307(d) of the Clean Air Act and failed to follow this clear congressional mandate. The next section reviews the potentially severe health and environmental effects of SO₂ and sulfate emissions. These effects underscore the seriousness of EPA's error.

II

THE GROWING EVIDENCE OF SULFUR-RELATED HEALTH AND ENVIRONMENTAL EFFECTS

A. A Survey of the Evidence

The House Committee on Interstate and Foreign Commerce, while considering amendments to the Clean Air Act in 1977, examined evidence suggesting that air pollution is seriously undermining the quality of American life and that a complex array of problems is left

53. See text accompanying notes 207-14 infra.

Episodes of high air pollution can cause dramatic increases in death, hospitalization, and work absenteeism rates. Ellison & Waller, A Review of Sulfur Oxides and Particulate Matter as Air Pollutants with Particular Reference to Effects on Health in the United Kingdom, 16 Env'tl Research 302 (1978); Fishelson & Graves, Air Pollution and Morbidity: SO₂ Damages, 28 Air Pollution Cont. A.J. 785 (1978); Gains are Reported in Clean Air Battle, N.Y. Times, Oct. 7, 1977, § 1, at 54, col. 1. Epidemiological studies continually correlate increased levels of pollution with increases in the number and severity of cardiac and respiratory problems. Fishelson & Graves, supra, at 785-89. Long-term exposure to the relatively high atmospheric pollution levels found in urban industrial areas can lead to chronic respiratory problems. Not only do high air pollution levels exacerbate the problems of the more susceptible members of society—the young, old, or infirm—but they may contribute to a
uncontrolled by the national ambient air quality standards.\textsuperscript{55} In addition to voicing concern over the human health impacts of air pollution, the committee expressed special interest in evidence demonstrating that air pollution is reducing agricultural productivity.\textsuperscript{56} The committee stressed the need for stringent pollution controls and implied that stronger measures might be necessary in the near future.\textsuperscript{57}

Several concepts should be considered in evaluating evidence concerning the impact of atmospheric pollutants. First, the concept of ambient standards\textsuperscript{58} is based on the assumption that a certain amount of pollution can be tolerated without adverse health effects. The House committee acknowledged that this premise that a safe threshold exists "appears to be false."\textsuperscript{59} Accordingly, the committee argued, "it is prudent public policy to require achievement of the maximum degree of emission reduction from new sources."\textsuperscript{60} The National Academy of Sciences, supporting this policy, warned: "Even use of the best available technology by new sources may not be sufficient to prevent serious irreversible environmental change in the foreseeable future."\textsuperscript{61}

A second important concept is synergism, the interaction of two or more chemicals whose combined impact exceeds that of any chemical individually.\textsuperscript{62} The synergistic interaction of atmospheric chemicals can have surprising and disturbing effects, including increased likelihood of higher susceptibility to illness and a shorter lifespan for the general population as well. Ellison & Waller, \textit{supra}, at 314-18.

Some recent economic studies suggest that air pollution controls on stationary sources are a cost-effective societal investment that results in decreased illness, hospitalization, and work absenteeism. \textit{Air Pollution Study: Controls Too Strict}, 113 SCIENCE NEWS 21 (1978) (air pollution controls on stationary sources are cost-effective, but controls on mobile-source air pollution are not); \textit{Gains Are Reported in Clean Air Battle}, N.Y. Times, Oct. 7, 1979, \textsection A, at 54, col. 1.

\begin{itemize}
  \item [58.] The Clean Air Act provides for national ambient air quality standards in addition to standards for new sources:
    \begin{itemize}
      \item [(1)] National primary air quality standards [shall be based on air quality criteria] and [shall allow] an \textit{adequate margin of safety} . . . to protect the public health. . . .
      \item [(2)] Any national secondary ambient air quality standard . . . shall specify a level of air quality . . . which [protects] the public welfare from \textit{any known or anticipated adverse effects} associated with the presence of such air pollutant in the ambient air.
    \end{itemize}
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  \item [62.] A good short discussion of synergism appears in H. Kenner, \textit{Bucky: A Guided Tour of Buckminster Fuller} 31-34 (1973). Fuller defined synergy as "[t]he behavior of whole systems, unpredicted by knowledge of the component parts or of any subassembly of
hood of human illness.\textsuperscript{63}

A third concept contributing to the complexity of the air pollution problem is latency. Plants, for instance, accumulate air pollutants over time, resulting in harm that does not appear for months or years after the pollutant has begun to accumulate.\textsuperscript{64} A similar phenomenon occurs in humans. Epidemiological studies have shown that children growing up in polluted urban areas suffer higher incidences of respiratory ailments and general illness than do other children.\textsuperscript{65} This type of childhood history corresponds strongly with chronic cardio-respiratory illness in adults.\textsuperscript{66}

\textbf{B. Adverse Effects of Sulfur Emissions}

The dominant sources of sulfur emissions are coal- and oil-fired electric power plants. About seventy percent of SO\textsubscript{2} emissions come from fossil-fuel generated electricity.\textsuperscript{67} Increasing the use of coal to generate electricity without stringent control of sulfur emissions will greatly exacerbate the adverse health and environmental effects outlined below, as the House Interstate and Foreign Commerce Committee recognized.\textsuperscript{68}

\textit{1. Sulfur Dioxide and Particulates}

Because SO\textsubscript{2} acts in concert with particulates, many studies have focused on the deleterious impacts of these two pollutants acting together.\textsuperscript{69} Increases in SO\textsubscript{2} and particulate levels have been associated components.” \textit{Id.} at 32. Synergy is dangerous in the air pollutant context precisely because of its unpredictable effects.

\textsuperscript{63} A recent example of this is an episode of high-SO\textsubscript{2} and ozone pollution in Rotterdam, Holland. A large number of bicyclists became nauseous or lost consciousness for unknown reasons. Subsequent investigations revealed that, although neither the level of SO\textsubscript{2} nor ozone was high enough to have a serious health impact alone, the two chemicals interacted synergistically, producing harm beyond the individual potential of either. 1977 \textit{House Report, supra} note 40, at 120-21, \textit{reprinted in} [1977] U.S. \textit{Code} Cong. \& Ad. \textit{News} at 1198-99. The power of a synergistic interaction is impossible to predict despite knowledge of the potency of the individual ingredients.

\textsuperscript{64} Linzon, Pearson \& Temple, \textit{Sulfur Concentrations in Plant Foliage and Related Effects}, 29 \textit{Air Pollution Cont. A.J.} 520 (1979). The authors state that “when a threshold level of sulfur accumulation is exceeded visible injury develops. Prior to the occurrence of visible injury the metabolic functions within the plant tissue are disrupted.” \textit{Id.} at 523. The authors conclude that “sulfur in excessive amounts can be accumulated and result in deleterious effects to plant life, and the concentrations of sulfur found in plant foliage can be used to diagnose effects.” \textit{Id.} at 524.

\textsuperscript{65} Ellison \& Waller, \textit{supra} note 54, at 315.

\textsuperscript{66} \textit{Id.}


\textsuperscript{68} See note 57 \textit{supra} and accompanying text.

\textsuperscript{69} Some laboratory studies have shown that a combination of SO\textsubscript{2} and particulates may produce an effect that is greater than the sum of the effects caused by these pollutant
with numerous ailments, including respiratory system irritation and lung inflammation, lung cancer, exacerbation of cardiac problems, and throat and eye irritation.\textsuperscript{70} Mortality rates, respiratory diseases, and general illnesses have increased dramatically during episodes of high pollution.\textsuperscript{71} Sulfur dioxide also has an adverse impact on plants.\textsuperscript{72}

2. Sulfates and Acid Precipitation

Atmospheric SO\textsubscript{2} interacts with other chemicals to create sulfates.\textsuperscript{73} Scientists agree that sulfate ions in the atmosphere are an important future environmental and economic hazard\textsuperscript{74} and a major contributor to "acid precipitation."\textsuperscript{75} Acid precipitation results when sulfate ions are washed out of the air by precipitation. By accumulating these ions, the precipitation attains a substantially higher acid content.\textsuperscript{76} Acid precipitation has been linked with many environmental impacts not directly related to human health, and recent evidence suggests that the problem is now national in scope.\textsuperscript{77}

\textsuperscript{70} Ellison & Waller, \textit{supra} note 54. See also 113 Science News 199 (1978). The Ellison & Waller report states that most studies throughout the world have indicated a continuous relationship between symptom prevalence and indices of pollution by sulfur oxides or particulate matter, and it was concluded in the World Health Organization report (1972) that discernible increases in prevalence were seen when concentrations of both of these pollutants exceeded 100 micrograms per cubic meter, as annual means.

\textsuperscript{71} Id. at 310; Thomas, \textit{Lung Cancer and Ambient Air Pollution}, 8 Env't L. 701 (1978).

\textsuperscript{72} Studies of plants near sources of SO\textsubscript{2} show fewer adverse reactions as distance from the source increases. See Linzon, Pearson & Temple, \textit{supra} note 64; Davis, Hutnik & Rosenberg, \textit{Forest Composition at Varying Distances from a Coal-Burning Power Plant}, 19 Env't L Pollution 307 (1979). The deleterious impacts of SO\textsubscript{2} result both from chronic and acute exposures and range from visible leaf injury to metabolic disruptions or a reduction in the rate of photosynthesis. Linzon, Pearson & Temple, \textit{supra}, at 522.


\textsuperscript{75} Likens, Wright, Galloway & Butler, \textit{Acid Rain}, 241 Scientific Am. 43 (1979).

\textsuperscript{76} Id.

One of the first indications of the devastating impact of acid precipitation on the environment was the killing of freshwater fish. Injury to plants has also been documented. Acid precipitation may be undermining soil fertility by washing out vital nutrients and by hindering the organic decay that revitalizes soil. Similarly, acid precipitation has been linked to decreases in farm and forest productivity. The potential for harm to the quality of human life from these effects is considerable.

Acid precipitation presents legal difficulties because the source of the acidity may be hundreds of miles from where the precipitation falls. Moreover, because acid precipitation does not respect political boundaries, international conflicts may arise. To avoid these conflicts, Canada and the United States are considering a treaty to control acid precipitation. Within the United States, several Northeastern States have threatened to sue some Midwestern States, particularly Ohio, to force

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78. Aluminum Pollution Caused by Acid Rain Killing Fish in Adirondack Lakes, 28 Bio-SCIENCE 472 (1978). In addition to killing fish directly, the increased acidity of the water accelerates mercury accumulation in fish and can cause aluminum poisoning as well. Id. See Acid Rain Threatens Fish, Aquatic Life in BWCA Wilderness and Voyageurs Park, 53 NAT'L PARKS AND CONSERVATION MAGAZINE, Apr. 1979, at 24. The increased acidity of the water has been associated with algae and fungi growths, a slowing of the rate of organic decomposition on lake bottoms, and a reduction in the number of species at each level of the food web. Report of the Committee on Health and Environmental Impacts of Increased Coal Utilization (Dec. 1977), reprinted in 43 Fed. Reg. 2,229, 2,231 (1978) [hereinafter cited as Rall Report]. The committee is commonly referred to as the Rall Committee, after its distinguished Chairman, David P. Rall, Director of the National Institute of Environmental Health Sciences.

79. Rall Report, supra note 78, reprinted in 43 Fed. Reg. at 2,230. For a more restrained view than the Rall Report of the impact of acid precipitation on vegetation, see Likens, Wright, Galloway & Butler, supra note 75, at 43. The authors state that rainfall acidity is certainly within the range of acidity where laboratory studies indicate that harmful effects could be expected on growing vegetation if it were exposed and sensitive. It is difficult, however, to isolate the effects of one environmental stress from all the others affecting vegetation, and so the overall effect of acid precipitation on plants has to be regarded as ambiguous in light of the present state of knowledge. Id. at 50.


83. Acid precipitation has also been linked to a variety of other environmental problems. There is some evidence to indicate that it might directly affect some small forms of animal life. Likens, Wright, Galloway & Butler, supra note 75, at 51. Acid rain undermines the health of both plants and small animals so that they become more susceptible to the ravages of pathogens and predators. Id. Acid precipitation also contributes to the structural deterioration of buildings, monuments and other physical objects. Rall Report, supra note 78, reprinted in 43 Fed. Reg. at 2,230 (1978).

84. Id. at 1,501-02. On August 5, 1980, U.S. and Canadian officials signed an agree-
them to take steps to control acid precipitation. The Northeastern States approached EPA first, arguing that the Agency should mandate coal washing, and perhaps scrubbing, and set a uniform national emission standard. Other proposals include controlling emissions from old power plants and directly limiting total atmospheric sulfur. To date, the Federal Government has only studied the problem.

III

CREATING THE REVISED NSPS: 1979-80

This section will chronicle the events leading to EPA's promulgation of the 1979 NSPS. The chronology of these events focuses attention on one of this Article's primary criticisms of the standard: that ex parte communications and influences on EPA after the close of rulemaking substantially affected the substance of the standard.

Due process concerns of public notice and an opportunity to be heard, held to be essential to meaningful public participation in administrative rulemaking, underlie restrictions on ex parte communication to work toward a formal treaty. The agreement calls for formal treaty negotiations to begin no later than June 1, 1981. [1980] 11 ENVIR. REP. (BNA) 549-50.


86. Id. In January 1979, Pennsylvania petitioned the Court of Appeals for the Third Circuit to review EPA relaxation of the West Virginia State Implementation Plan (SIP), alleging that EPA review of SIP revisions must include consideration of the effects of interstate transport of pollutants. Pennsylvania v. EPA, No. 79-1025 (3d Cir. 1979). Pennsylvania also recently sued EPA in the Court of Appeals for the Sixth Circuit to compel controls on the existing plants that allegedly exacerbate acid rain and other air pollution problems in Pennsylvania. [1980] 10 ENVIR. REP. (BNA) 2093.

87. [1979] 10 ENVIR. REP. (BNA) 1339-42. Stephen J. Gage, EPA Assistant Administrator for Research and Development, labeled acid rain a potential "ecological disaster." Id. at 1340. He stated that "[a] plan to control old power plants is one of the big regulatory issues we will have to face, if the effects [of acid rain] are as serious as we think they may be." Id. at 1342.

88. Id. at 1016. President Carter called for a ten-year study of acid precipitation, noting that acid rain is a growing environmental threat to food crops, fish, trees, lakes, soil fertility, and buildings. Id. Congress recently approved a ten-year study to identify the causes and sources of acid precipitation and to evaluate its economic and environmental effects. Acid Precipitation Act of 1980, Pub. L. No. 96-294, § 702(b), 94 Stat. 611 (1980) (to be codified at 42 U.S.C. § 8901(b)).

89. See part IV, C-F infra.


cations. Although neither the Clean Air Act Amendments nor the Administrative Procedure Act expressly limit ex parte contacts in informal rulemaking, these statutes may be read to require that the administrative record contain all factors significantly shaping the final rule. The following chronology will reveal numerous improper ex parte contacts respecting several critical issues. Some contacts consisted of additional data and analyses submitted by industry after the comment period, while others involved intense political pressure from government. Both types of ex parte communications have undermined the fairness of the EPA proceedings and precluded adequate judicial review.

A. Setting the Stage

In 1977, while Congress was enacting a rigorous revised NSPS program as part of the Clean Air Act Amendments, the Carter administration was preparing the grandiose National Energy Plan (NEP). The NEP depended heavily on the domestic coal industry to support a rapid transition from oil and natural gas. Various governmental, quasi-governmental, and private sources had published reports predicting and supporting the expanded use of coal in the United States. In hearings on the NEP, EPA Administrator Douglas Costle stated the administration's position on coal use and environmental quality:

One of [the] basic tenets [of the National Energy Plan] is that increased utilization of domestic fuels must be accompanied by strong efforts to conserve energy and by stringent enforcement of environmental controls. . . . Strict enforcement of the air and water laws is mandatory if we are to avoid . . . sacrificing our environment in the process of solving our energy problems.

93. See notes 193 & 203 infra and accompanying text.
94. See parts IV.A & IV.B infra.
95. See part IV.B infra.
By the June 1979 promulgation of the revised SO\textsubscript{2} standard for new coal plants,\textsuperscript{100} however, the energy situation and political climate had drastically changed. First, the NEP, a package of five bills, was finally passed in late 1978.\textsuperscript{101} One of these bills, the Power Plants and Industrial Fuel Use Act of 1978 (PIFUA),\textsuperscript{102} purported to engage the country in a massive effort to convert existing oil and gas burning plants to coal. Regardless of whether such an ambitious conversion to coal was possible,\textsuperscript{103} a coal boom mentality was emerging. Second, the winter of 1977-78 was harsh in the United States. Cold temperatures were often accompanied by shortages of natural gas.\textsuperscript{104} Third, oil prices rose almost sixty percent during the first six months of 1979.\textsuperscript{105} These physical and economic discomforts encouraged the aggressive coal lobby.

The final and perhaps most significant event preceding the revised SO\textsubscript{2} standard was the Iranian revolution and the subsequent oil and gasoline shortages in the United States.\textsuperscript{106} Whether or not the interrup-

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\textsuperscript{100} 44 Fed. Reg. 33,580 (1979).
\textsuperscript{103} See U.S. General Accounting Office; U.S. Coal Development — Promises, Uncertainties (1977). The GAO identified and analyzed several significant constraints on rapidly increased coal use and concluded that the achievement of President Carter's goal of 1.2 billion tons annually by 1985 was highly unlikely. Id. at ii-v. See also Energy Future, supra note 2, at 81-97.

An administration proposal to speed the conversion process by providing federal grants and loans to utilities, the so-called "oil backout" bill, was approved by the Senate on June 24, 1980. [1980] 11 Envir. Rep. (BNA) 333-34. In the House, however, environmentalists and coal and utility industry lobbyists have stalled the bill on nondegradation and conversion cost allocation issues, and the bill is unlikely to pass during the 1980 session. En. Users Rep. (BNA), Sept. 18, 1980, at 4-5.


\textsuperscript{104} Energy Future, supra note 2, at 56.
\textsuperscript{105} O.E.C.D. Study Foresees Oil-Induced Growth Lag, N.Y. Times, July 19, 1979, § D, at 3, col. 1.
\textsuperscript{106} In late 1978, Iranian oil production stopped and then resumed at about half its old level (an average of 5.6 MBD for most of 1978 and 3.5 MBD in 1979), but during the temporary shortages world demand changed little in response to price increases. See Rustow, Oil in the 1980's: A Question of Supply, N.Y. Times, Jan. 6, 1980, § 3, at 14, col. 3. Demand for
tion in Iranian crude oil supplies produced actual shortages in this country, long lines at the gas pumps brought America's dependence on imported oil to the forefront of public debate. These events were available to coal proponents in publicizing the purported burden of air pollution regulations on the coal industry. Their attempts to weaken the proposed NSPS for SO$_2$ succeeded.

B. Nine Months of Controversy

During fall 1978, EPA was analyzing the relative advantages of different approaches to the standard-setting problem. Administrator Costle argued that the 1977 amendments "contain[] a presumption in favor of full scrubbing," asserting that the clear language of section 111 and its legislative history indicated an unequivocal congressional determination to require full scrubbing technology on all new plants. The full scrubbing proponents also argued that their approach was necessary to preserve the "prevention of significant deterioration" (PSD) increments in existing clean air areas. In addition, they argued that full scrubbing would make litigation over the standard less likely and prevent delays that would result from determining BACT on a plant-by-plant basis. Costle endorsed full scrubbing as the Agency's proposal but specifically declared that EPA would remain open to other options.


The Iranian supply interruption may have been used by the oil industry to increase profits. Sherril, *The Case Against the Oil Companies*, N.Y. Times, Oct. 14, 1979 (Magazine), at 32. See EN. USERS REP. (BNA) Mar. 8, 1979, at 9-10 (Congressional Research Service study shows shortage resulted more from poor inventory management and improper supply allocation than from production decline).

Costle also stated that the 1977 House Report contains several statements indicating in so many words the committee expected full scrubbing to be chosen and lists six tests that the NSPS must meet "which full scrubbing will find it easier to meet than partial scrubbing would." Id. Costle also stated, however, that the presumption in favor of full scrubbing "might be overcome by detailed analysis of the factual impacts of various standards." Id.

Costle also stated, however, that the presumption in favor of full scrubbing "might be overcome by detailed analysis of the factual impacts of various standards." Id.


EN. USERS REP. (BNA), Oct. 19, 1978, at 12. At about the same time, a draft study prepared for DOE and EPA concluded that sulfur emissions nationally would be the same whether new power plants use full or partial scrubbing, and that in the West full scrubbing would cause emissions to increase. Id. (quoting ICF, Inc., Further Analysis of Alternative
EPA proposed its revised NSPS for SO$_2$ in September 1978. Many people participated in the hearings, and the Agency received more than 600 comment letters and related documents before the formal close of the record on January 15, 1979. According to an EPA Deputy Administrator, the degree of scrubbing to be required remained unresolved at the closing of the record.

Soon after the record was closed, EPA officials stated that the Agency was contemplating making its final standard more rigorous than the proposed standard. EPA considered changing the eighty-five percent removal requirement, measured on a 24-hour average, to ninety percent removal, measured on a continuous thirty-day average. More significantly, EPA considered lowering the proposed 1.2 pounds per million BTU's emission ceiling to something "in the range of between 0.6 and 0.8 pounds per million BTU's." Although the proposed shift in percentage reduction would have little effect on the level of emission control required and would allow more flexibility in maintaining the control system, the lower emission ceiling would certainly have toughened the controls. Agency sources reiterated that EPA had not retreated from its commitment to full scrubbing of SO$_2$ emissions. Their continued confidence may have been attributable in part to newly released EPA data on adipic acid as an additive.

New Source Performance Standards for New Coal-Fired Power Plants (draft report)). The ICF report asserted that full scrubbing would not produce any near-term health or environmental benefits and would generate extra costs for control while maintaining a higher level of demand for oil. Although the report was only in draft form and was based on highly complex assumptions regarding reliance on existing plants under full scrubbing, officials acknowledged that the level of the power plant standard was a political, rather than health, issue likely to be decided by President Carter.
to scrubbers. With adipic acid, more than ninety percent SO$_2$ removal was consistently being achieved at test plants at lesser cost. In addition, sophisticated computer modeling, performed as a part of EPA’s “Phase 2 analysis,” indicated that “an emission ceiling more stringent than that proposed in September would serve to reduce emissions in regions where high-sulfur coal is fired with little adverse effect on costs and coal production.”

In early 1979 the pace and direction of EPA decisionmaking changed. On March 5, 1979, EPA official Walter Barber told a symposium on flue gas desulfurization: “We have been charged by the courts to make the decision by the 19th of this month, but I regret to tell you it is unlikely the decision will be announced at that time.” The decision would be delayed, he said, from six to twelve weeks.

Barber stated that EPA Administrator Costle had failed to make a timely decision because he was in a “tremendous box” due to conflicting pressures from industry and environmental groups. Barber also said that Costle had begun to examine the option of establishing differing regional control requirements, with low scrubbing in the West, partial “sliding scale” scrubbing in the Midwest, and full scrubbing in the East. While acknowledging that some of the Act’s authors seem to have intended NSPS to require full scrubbing, Barber said that the Act gave the Administrator “some flexibility” in striking an “environment, energy, and economic balance.” Soon after Barber’s state-

122. *Id.* at 16. *See* Ayres & Doniger, *supra* note 120, at 71 n.53.
123. EDF Brief, *supra* note 118, quoting Memorandum from John Haines (Jan. 17, 1979). For a description of EPA’s “Phase 2” and “Phase 3” analyses, see notes 292-93 infra.
124. EPA felt increasing pressure in early 1979 to refrain from imposing costly regulatory requirements. During February 1979, a major scuffle between EPA and the administration surfaced in the media. Charles Schultzze, Chairman of the Council of Economic Advisors, and Alfred Kahn, President Carter’s chief advisor on inflation, sent a memorandum to EPA suggesting that its efforts to implement the 1977 amendments to the Clean Water Act requiring use of BACT, 33 U.S.C. § 1311(b)(2)(A) (Supp. II 1978), could be “prohibitively expensive” and that the whole effort should be reexamined. *Some in E.P.A. Assail White House Moves,* N.Y. Times, Feb. 22, 1979, § A, at 1, col. 2. One Agency official argued that the administration review invariably represented the industry position: “This often amounts to giving industry one more shot at weakening the regulations after the record is closed.” *Id.* Cf. Shabecoff, *White House is Cool to Charges of Interference in Role of E.P.A.*, N.Y. Times, Feb. 23, 1979, § A, at 23, col. 1 (Council on Wage and Price Stability interference in settlement between EPA and Tennessee Valley Authority concerning $1 billion expenditure to reduce emissions).
125. [*1979* 10 ENVIR. REP. (BNA) 2067.]
126. *Id.*
127. *Id.*
128. Partial scrubbing on a sliding scale basis would impose a percentage reduction requirement that varied with the initial sulfur content of the coal, so that the percentage of total sulfur removed from low-sulfur coal could be less than that removed from high-sulfur coal. *See* [*1979* 9 ENVIR. REP. (BNA) 1501, 1604.]
129. *Id.* at 2067.
130. *Id.*
ments, EPA announced the judicially approved June 1, 1979 deadline for revising the coal NSPS.\footnote{131}

The coal industry, aware that EPA was considering only those scrubbing alternatives that incorporated a 0.55 pound emission ceiling, launched a campaign to change the Agency's decision.\footnote{132} As part of this campaign, the National Coal Association (NCA) requested a meeting with EPA to present additional information. Although the public comment period for the standard had ended months earlier, the Agency scheduled a meeting for April 5, 1979.\footnote{133}

EPA invited representatives of NCA, the United Mine Workers, the utility industry's Utility Air Regulatory Group (UARG), the major coal companies, the Natural Resources Defense Council (NRDC), and the Environmental Defense Fund (EDF) to the meeting.\footnote{134} At that meeting, EDF received its first copies of detailed new studies prepared by EPA and NCA on the impact of more stringent emission ceilings on available coal reserves.\footnote{135} The final form of the NSPS was the subject of loud dissent several times during the meeting.\footnote{136} Polar positions were represented by the NCA, which expressed its distress with any standard lower than 1.2 pounds per million BTU's, and an EPA official who argued that a 0.55 pounds per million BTU’s standard would be cost-effective.\footnote{137} No consensus was reached at the April meeting.

That meeting, however, sparked a series of data submissions and other ex parte communications from NCA to EPA in the months that followed. On April 6, 20, and 23, NCA President Carl Bagge forwarded additional materials to EPA Administrator Costle and clarified them in an April 29 telephone call to the head of EPA's Office of Air Quality Planning and Standards, Walter C. Barber, Jr.\footnote{138} At least six private meetings took place between upper level EPA officials, NCA

\footnote{131} Id. at 2246-47.


On March 12, George C. Freeman, Jr., lead counsel to the utility industry's Utility Air Regulatory Group (UARG) stated at a meeting of the American Institute of Industrial Engineers in Washington, D.C. that his group favored retaining the 1.2 pounds per million BTU's sulfur emission ceiling originally proposed by EPA, but that he and others were extremely concerned that the agency "is seriously considering" setting the standard at 0.70 to 0.75 pound per million BTU's and imposing a combined coal washing and scrubbing requirement. En. Users Rep. (BNA), Mar. 15, 1979, at 13-14. Saying that "we will litigate forever" about what constitutes an "adequately demonstrated" continuous system of emission control, Freeman told the meeting he expected EPA to adopt "some version of the sliding scale" in the final NSPS. Id.

\footnote{133} EDF Brief, supra note 118, at 15.


\footnote{135} EDF Brief, supra note 118, at 15.

\footnote{136} Id. at 16 (citing Minutes of April 5 meeting, Doc. No. IV-E-11).


\footnote{138} EDF Brief, supra note 118, at 16-17.
representatives, Members of Congress, and administration officials during March, April, and early May.139

About one week after the April 5 meeting, NCA president Bagge delivered an address calling on Congress to pressure the executive agencies into working for expanded coal use and production.140 Announcing Senate Majority Leader Robert Byrd’s support of NCA goals of easing environmental and other regulatory restrictions, Bagge called for an all-out effort to double coal production by 1985 in accordance with the National Energy Plan.141

Both before and after this address, Members of Congress forwarded various coal industry comments and data to EPA.142 High-level administration officials also acted as conduits for coal industry comments.143 In addition, several Members of Congress wrote to EPA without referring to any specific coal companies; all of these letters opposed the Agency’s consideration of the 0.55 pound per million BTU’s emission ceiling.144

By late April 1979 the pressure on EPA had reached a peak. A significant source of pressure was Senator Byrd, who called a private meeting with Presidential Aide Stuart Eizenstat, Costle and other EPA officials, and representatives of NCA on April 23 to discuss the standard.145 Environmental groups were not informed of the meeting.146 Unlike EPA’s April 5 meeting, no transcript or detailed notes were kept.147 David Hawkins, EPA Assistant Administrator for Air, Noise, and Radiation, prepared a short paragraph for the docket that described the meeting in vague generalities, including the statement that

139. Id. at 17.
140. EN. USERS REP. (BNA), Apr. 19, 1979, at 18-19.
141. Id.
142. EDF Brief, supra note 118, at 19-20. These included:
   April 11, 1979, Senator Henry Bellmon forwarding letter from Joseph H. Williams of the Williams Companies, a substantial shareholder of Peabody Coal Company.
   April 18, 1979, Rep. Robert H. Mollohan citing the NCA information and forwarding material from Consolidated Coal Company, Pittsburgh.
   April 19, 1979, Rep. Andy Jacobs forwarding mailgram from Carl B. Bants, Executive Vice President, Indianapolis Power and Light Company.
   May 3, 1979, Senator Harrison Schmidt forwarding letter from C.J. Head, the Williams Company, owner of 27.5% of the Peabody Coal Company.
   Id. at 20 n.2.
143. Id. at 21-22.
144. Id. at 20-21. These included letters from Representatives John T. Myers, Paul Findley, Joel Deckard, and Henry J. Hyde. Id. at 20 n.2.
145. EDF Brief, supra note 118, at 17.
146. Id. at 18.
147. Id.
"Mr. Costle advised the NCA representatives that [their] material would be fully considered." At Costle's May 2 meeting with Byrd and Bagge, Byrd allegedly delivered "an impassioned plea" against a 0.55 pound emission ceiling. Senate and administration sources indicated that Byrd had hinted strongly that the administration needed his support in its attempt to win approval of the Strategic Arms Limitation Treaty and the windfall oil profits tax.

On May 2, Byrd and twenty-five other Senators from coal-producing States sent a letter to President Carter, with a copy to Costle, urging a continuation of the 1.2 pounds per million BTU's ceiling. On the same date, Byrd met the EPA officials and NCA representatives to discuss the Agency's evaluation of the NCA data and other new information. Byrd and other Senators met with President Carter on May 8 to discuss the NSPS.

Advocates of tougher standards were also active. During May EDF alleged that concerted utility effort had pressured the coal companies into taking a tough position on the NSPS by suggesting that they would not buy high-sulfur coal if the new standard required more scrubbing. NRDC argued that the proposed standard failed to test the state-of-the-art scrubber technology and reminded EPA that technology forcing was at the heart of the NSPS concept.

By May 5, however, Costle had decided to return to the 1.2 pound limit and to require only partial scrubbing of sulfur emissions. Required sulfur removal would range from seventy to ninety percent, de-

148. Id.
149. [1979] 10 ENVIR. REP. (BNA) 35. Hawkins insisted that Costle "is still looking at a range of options for the standard." Id.
150. EPA Will Relax Pollution Rules for Coal Power, Wash. Post, May 5, 1979, § A, at 1, col. 5. After his meeting with Costle and Bagge, Senator Byrd denied that he intended to use the Strategic Arms Limitation Treaty as a "hostage" in exchange for a push from the administration to relax the standards. [1979] 10 ENVIR. REP. (BNA) 35.
151. EDF Brief, supra note 118, at 21; [1979] 10 ENVIR. REP. (BNA) 35.
152. Id. Twelve persons participated in that meeting, but it is documented solely by a 49-word memorandum in the docket. Id.
153. [1979] 10 ENVIR. REP. (BNA) 35. EDF staff attorney Robert J. Rauch commented that "suddenly everything went underground" in May when Senator Byrd and other Senators entered the debate. Id.
154. Id.
155. Id. On May 31, the General Accounting Office published a study severely criticizing EPA regarding the overall reliability of its air quality data and its efforts to create an efficient national air quality monitoring system. General Accounting Office, Air Quality: Do We Really Know What It Is? (May 31, 1979). The report, which casts serious doubts upon the information base for EPA policy decisions for air pollution control generally, stated that "until a standardized, comprehensive air monitoring system exists, air quality data will provide a questionable basis for the policy decisions being made." Id.
pending on the sulfur content of the coal to be burned. One Senate source commented that the decision followed two weeks of "hardball arm-twisting" by Majority Leader Byrd and other coal-State Senators. By late May, Costle and Energy Secretary James E. Schlesinger were jointly defending the sliding scale on nonenvironmental grounds by referring to the economic and national security justifications for expanded coal use.

Costle signed the revised NSPS on June 1, 1970; it was published in the Federal Register on June 11. The standard retained the 1.2 pounds per million BTU's emission ceiling and set the percentage reduction requirement at ninety percent where uncontrolled emissions would be greater than or equal to 0.6 pounds per million BTU's and only seventy percent where uncontrolled emissions would be less. Instead of adopting regional standards or additional removal increments along the scale, EPA settled for a simple two-tier system.

Costle announced that the new standard had struck a "remarkable balance" of economic and environmental requirements. EPA estimated that, compared to full scrubbing, the variable control standard would increase SO$_2$ emissions in the West by 200,000 tons by 1995, but would lessen eastern emissions by approximately the same amount. Predicting that utilities would switch to the newly developed dry scrubbing technology when less expensive under the nonuniform percentage reduction requirement, the Agency estimated that, compared to full control, the nonuniform standard would save about $1.1 billion per year by 1995.

EPA's apparent capitulation to industry in setting the revised

157. Id.
158. Id.
159. EN. USERS REP. (BNA), May 31, 1979, at 5, 8-9.
161. Id. at 33,614.
162. The nonuniform percentage reduction requirement is discussed in more detail in part V infra. Shortly after the announcement of the revised NSPS, scrubber technology vendors expressed willingness to guarantee 95% sulfur removal to a proposed new 1600 megawatt coal-fired plant to be built by the Pacific Gas and Electric Company. The plant would burn low-sulfur coal and could meet a 0.12 pounds per million BTU sulfur dioxide emission ceiling. [1979] 10 ENVIR. REP. (BNA) 550. The rulemaking record contains several references to similar instances of high scrubber performance. See Ayres & Doniger, supra note 120, especially nn. 53-54.
163. EN. USERS REP. (BNA), May 31, 1979, at 8-10.
164. 44 Fed. Reg. 33,607 (1979). The reduction in eastern emissions stems from a greater replacement of old, dirty plants under the less stringent and less expensive scrubbing alternative, resulting in cleaner air overall.
165. For an explanation of dry scrubbing technology, see notes 41 supra and 293 infra. Dry scrubbing is discussed in text accompanying notes 344-67 infra.
166. 44 Fed. Reg. 33,607 (1979). According to EPA, by 1995 the revised NSPS will cost utilities $3.6 billion annually above current costs and will add more than two percent to the average ratepayer's bill. EN. USERS REP. (BNA), May 31, 1979, at 8-10.
NSPS did not end pressures to ease environmental restrictions on increased coal burning. For example, a DOE report to the President suggested methods of increasing the production and use of coal. The report, entered in the *Congressional Record* on June 14 by Kentucky Senator Wendell Ford, perpetuated a growing tendency within congressional and administration circles to identify the Clean Air Act as a principal constraint on coal use and to predict that the alternative to increased coal production would be permanent economic slowdown.

In July, the chairman of the Edison Electric Institute conveyed a foreboding message to consumers and the coal industry. He estimated that the coal NSPS alone would increase by $50 billion the present value of utility bills between 1984 and 2020, thereby greatly reducing the attractiveness of coal. Those costs, according to the Institute, would reduce coal use by 140 million tons per year by 1990.

On July 15, President Carter delivered a televised address on energy, proposing aggressive programs to combat our dependence on imported oil, including the "most massive commitment of peacetime funds in our nation's history" to the development of a predominantly coal-based synthetic fuels industry. Through utility and industry conversions, construction of new conventional coal plants, and development of a synthetic-fuels industry, the Carter administration's energy program would rely heavily on coal.

Against this politically charged, pro-coal background, the environ-

167. The report was one of three requested in April 1979 by President Carter to recommend measures for increasing coal burning. It calls for increases from 623 million tons in 1978 to 1.8 billion tons in 1985 and 2.1 billion tons by 2000, an average annual increase of 4.5%. *En. Users Rep.* (BNA) 18-19 (June 21, 1979) (discussing Department of Energy, Increasing Coal Production and Use (unpublished report 1979)).

168. *Id.* at 19. Note the comments of Senator Ford in reaction to the report: "We're talking about more than just an energy shortage — what we're really talking about is this nation's economic survival in the near-term future." *Id.*

169. *Id.* A basic problem with the DOE position is its failure to recognize that Clean Air Act protections enhance rather than retard the prospects of long-term coal use by preserving air quality increments for future use. See text accompanying notes 330-37 infra.


171. *Id.*


[a] massive synthetic fuels program is an example of ch[o]osing a conceptually simple technocratic solution for what is a complex societal program. It is also an example of over-concentration — an action which would leave us highly vulnerable to risks of total failure since we would have foregone other options.

mental groups that had consistently fought for a more stringent NSPS challenged the adopted standard. On June 1, 1979, the day that the revised standard was signed, the Sierra Club filed a petition for judicial review of the standard in the Court of Appeals for the District of Columbia Circuit. The Environmental Defense Fund, the California Air Resources Board, and the Appalachian Power Company also filed petitions.

In a June 29, 1979 letter to EPA, EDF requested that the Agency "formally reconsider" its newly promulgated NSPS. EDF attorneys alleged in their petition for reconsideration that NCA was allowed to introduce information after the close of the official comment period. This information indicated that a standard lower than 1.2 pounds per million BTU's would preclude the use of much eastern coal, causing economic hardship in eastern coal-producing states. The introduction of this information, in addition to ex parte communications between Senator Byrd and EPA Administrator Costle, with Byrd allegedly acting as a conduit for the coal industry, violated section 307(d)(5) of the Clean Air Act, according to EDF. EDF reiterated that the record was formally closed on January 15 and that EPA should not have considered any material submitted after February 15 without formally reopening the proceedings.

On July 18, the Sierra Club followed the EDF letter with its own reconsideration petition, labeling the NSPS "grossly inadequate" and "patently based on improper and erroneous input." The Sierra Club claimed that dry scrubbing was not an "adequately demonstrated" control technology and characterized EPA's decision to allow it as "a hastily conceived attempt to justify a decision to yield to severe political pressure." Not unexpectedly, UARG also petitioned EPA to reconsider the standard, based on its belief that the standard was too stringent and would substantially restrict the use of midwestern and


174. Id.


177. Id.


179. Id.

180. Id. at 898.

181. Section 111 requires that the NSPS reflect the degree of control achievable by using the best technology "which has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (Supp. II 1978).

182. Id.
eastern coal.\textsuperscript{183}

Approximately four months later, on October 26, 1979, EDF and the Sierra Club, having received no response to their reconsideration requests,\textsuperscript{184} petitioned the Court of Appeals for the District of Columbia Circuit for an order compelling EPA to act on their petitions.\textsuperscript{185} They also asked that the Agency be required to consider their petitions separately from the UARG petition which, they claimed, would take too long to analyze.\textsuperscript{186}

On January 30, 1980, Administrator Costle issued a 23-page decision denying all the petitions.\textsuperscript{187} Costle relied on section 307(d)(7)(B)\textsuperscript{188} of the Clean Air Act, ruling that the petitioners failed to "demonstrate . . . that it was impracticable" to raise their objections during the public comment period or show that "the grounds for . . . objection arose after the period for public comment and such objection is of central relevance to the outcome of the rule."\textsuperscript{189}

The EPA decision is another benchmark in the still unresolved NSPS dispute. The Court of Appeals will rule on the petitions for review of the reconsideration denial soon, having consolidated them with the earlier petitions.\textsuperscript{190} This overview of the 16-month period from proposal of the revised standard to denial of reconsideration reveals the remarkable extralegal context in which EPA "implemented" the Clean Air Act. The decision is a symbol of the growing controversy over the energy crisis, the cost-effectiveness of government regulation, and regulation of uncertain but potentially significant risks. In the NSPS decision of June 1, 1979, political influences overwhelmed legal strictures. In that context, the opinion denying reconsideration gives every appearance of being an after-the-fact scramble to find legal or policy rationalizations for the original NSPS decision.

The remainder of this Article will critically examine the Administrator's decision in light of the Clean Air Act language and legislative history and predict the reception that the petitions for review will receive in court. In concluding, the Article will briefly discuss certain substantive defects that grew out of EPA's procedural errors in the NSPS rulemaking.

\textsuperscript{183} Reconsideration Denial Opinion, \textit{supra} note 173, at 8,210.
\textsuperscript{184} See notes 173 & 180 \textit{supra}.
\textsuperscript{185} \textit{[1979]} 10 ENVIR. REP. (BNA) 1544.
\textsuperscript{186} EPA had rejected their plea for a separate consideration on October 11, 1979. \textit{Id}.
\textsuperscript{187} \textit{[1980]} 10 ENVIR. REP. (BNA) 1977.
\textsuperscript{189} Reconsideration Denial Opinion, \textit{supra} note 173, at 8,210.
\textsuperscript{190} EDF Brief, \textit{supra} note 118, at 5.
IV
ANALYSIS OF THE NSPS REVISION PROCESS

Where objections to a promulgated rule arise after the close of the comment period and are of "central relevance" to the formulation of the rule, section 307(d) of the Clean Air Act commands that "the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed."

The defects in the revised coal NSPS process were of central relevance to the rulemaking outcome. This section will develop the following major procedural problems: (1) EPA accepted NCA data and analyses after the close of the comment period without reopening the record for further public comment; (2) EPA did not make available transcripts or even detailed summaries of several important presentations by NCA, Senator Byrd, and administration officials; (3) Senator Byrd exerted political pressure on EPA Administrator Costle, thus influencing the outcome of the rulemaking; and (4) the Agency failed to reopen the record for public comment after performing significant further analyses of the dry-scrubber option and the impact of variable controls on high-sulfur coal reserves. The author contends that these post comment period defects led to a rule that violated congressional intent, that EPA's denial of reconsideration was therefore incorrect, and that some of the petitioners met their burden under section 307 and established their right to a new proceeding.

A. Ex Parle Communications: General Issues

The Administrative Procedure Act (APA) establishes notice and comment requirements for agencies involved in informal rulemaking. It does not, however, prohibit ex parte communications in informal rulemaking. Nevertheless, permitting ex parte communications in informal rulemaking risks damaging the accuracy, fairness, and public trust in the agency's decision-making processes. The accuracy of agency factfinding may suffer if the data and arguments brought before the agency are not exposed to other parties' scrutiny and rebuttal; secret negotiations also bar interested parties from knowing all of the issues the agency is considering and presenting data concerning those issues. See Note, Due Process and Ex Parte Contacts in Informal Rulemaking, 89 YALE L.J. 194, 198 (1979) [hereinafter cited as Due Process]; Note, Ex Parte Contacts Under the Constitution and Administrative Procedure Act, 80 COLUM. L.

192. The Agency must give notice of a proposed rulemaking and allow interested parties to submit "written data, views, or arguments." 5 U.S.C. § 553(b) (1976). The Agency may also allow oral presentations. Id. § 553(e).
193. The APA defines an ex parte communication as "an oral or written communication note on the public record with respect to which reasonable prior notice to all parties is not given.” Id. § 551(14).
194. The accuracy of agency factfinding may suffer if the data and arguments brought before the agency are not exposed to other parties' scrutiny and rebuttal; secret negotiations also bar interested parties from knowing all of the issues the agency is considering and presenting data concerning those issues. See Note, Due Process and Ex Parte Contacts in Informal Rulemaking, 89 YALE L.J. 194, 198 (1979) [hereinafter cited as Due Process]; Note, Ex Parte Contacts Under the Constitution and Administrative Procedure Act, 80 COLUM. L.
pearance of political impartiality, and potential for effective judicial review of the proceeding. Unrestricted ex parte contacts may also harm the symbolic function of due process, which is to foster the belief that government decisionmakers will respond fairly to concerns expressed by the public.

The due process clause of the Constitution may itself limit ex parte communications, particularly where informal rulemaking involves adjudicative facts, politically weak parties, or constitutionally protected interests in life, liberty, or property. Many individuals may have important economic or noneconomic interests at stake in an informal rulemaking, but political control over agency decisionmakers is insufficient to safeguard these interests. Many legislators and judges, among others, believe agency discretion is exercised in a manner unduly favorable to organized interests, especially regulated firms.

Regardless of whether constitutional limits exist, Congress responded to the dangers of unbridled ex parte contacts in 1976 by

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195. A special hearing biases the proceeding by affording one but not all of the parties an opportunity to present their position to the Agency in a nonadversarial situation; fairness is also undermined where some parties are allowed to present post comment period data and others are not. See references in note 194 supra.

196. Political pressure may prevent the agency from making a reasoned decision based on statutory criteria. See Due Process, supra note 194, at 198. See also D.C. Fed'n of Civic Ass'n's v. Volpe, 459 F.2d 1232, 1245-46 (D.C. Cir. 1971), cert. denied 405 U.S. 1030 (1972).

197. Undisclosed ex parte communications prevent the court from determining the actual basis for the agency's decision. Ex Parte Contacts, supra note 194, at 385. See also Home Box Office, Inc. v. FCC, 567 F.2d 9, 53 (D.C. Cir.), cert. denied, 434 U.S. 829 (1977); United States Lines, Inc. v. Federal Maritime Comm'n, 584 F.2d 519, 541 (D.C. Cir. 1978).


199. U.S. Const. amend. V.

200. The Supreme Court held in Mathews v. Eldridge, 424 U.S. 319, 335 (1976), that due process requirements vary with the risk of erroneous deprivation of a protected interest under prevailing procedures, the character of the governmental interest involved, and the strength of the private interest at stake. Inaccuracy, bias, political pressure, and undisclosed communications all increase the risk of erroneous deprivation. See text accompanying notes 194-97 supra. Small, geographically dispersed groups, such as environmental organizations, with limited financial resources may be unable to use the political process to overcome these risks. Ex Parte Contacts, supra note 194, at 385-86.

Courts have not delineated the scope of the interests protected by due process in contexts similar to the NSPS controversy. If construed broadly, a protected interest could arise whenever an agency promulgated rules, such as environmental, safety, or public health standards, that affect the life or health of an identifiable group. Id. at 384.

201. See Comment, supra note 198, at 893-95.

202. Stewart, The Reformation of American Administrative Law, 88 Harv. L. Rev. 1669, 1684-85 (1975). Professor Stewart argues that agencies are lax toward industry because they depend on industry cooperation, their controls tend to enhance the position of established firms by making entry more difficult, and limited resources require that the agency compromise most disputes. Id. at 1685-86.
amending the APA to prohibit ex parte communications in formal rulemaking proceedings and agency adjudications and to require disclosure of contacts occurring despite the prohibition. Congress has not broadened the ban to cover informal rulemaking, but the recent trend toward hybrid rulemaking, where procedural protections more stringent than APA requirements are built into an agency's organic statute, indicates congressional concern with the preservation of accuracy and fairness in all agency rulemaking.

B. Section 307 of the Clean Air Act

The 1977 amendments to section 307 of the Clean Air Act exemplify this congressional concern. In adding section 307(d), Congress sought to remedy several deficiencies in the informal rulemaking procedures developed under the 1970 amendments. Congress wanted "a clearly defined record on which agency consideration of a rule, public comments, and judicial review" could be based. Requiring the Administrator "to state clearly the reasons for his action," these reforms were designed to insure commenters "an adequate opportunity to challenge the factual basis underlying the proposed rule." According to the House report, section 307(d) would provide "thorough and careful procedural safeguards that insure an effective opportunity for public participation in the rulemaking process," and yet "retain the flexibility and expedition of the informal rulemaking approach."


209. Id.

Although the Clean Air Act does not prohibit ex parte communications, section 307(d) requires that all items significantly shaping the final rule appear in the record and be subject to the procedural safeguards of that provision. Only thus interpreted can the section provide "a satisfactory framework both for agency decisions and for judicial review." Under such a rule, informal communications after the comment period, written or oral, would be entered in the record and subjected to public scrutiny, thus losing their ex parte character and eliminating some of the problems that such contacts otherwise create. If the communications are sufficiently important, it may be necessary to extend the comment period or even propose an amended rule. If these procedures were followed, the reviewing court would know that the record before it was complete and had been available in its entirety to each of the participants in the rulemaking.

EPA did not adhere to the procedural safeguards of section 307 in the coal NSPS case. The rulemaking chronology reveals damaging ex

§ 7607(d)(1)(C) (Supp. II 1978), requires that each proposal for rulemaking include a statement of the basis and purpose for the proposed rule, setting forth "(A) the factual data on which the proposed rule is based; (B) the methodology used in obtaining the data and in analyzing the data; and (C) the major legal interpretations and policy considerations underlying the proposed rule." Id. § 7607(d)(3).

The Administrator must establish a rulemaking docket at the time the rule is proposed, id. § 7607(d)(2), which must include all of the documentation noted above, id. § 7607(d)(3), all the public comments, the transcripts of any public hearings, and all "documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking." Id. § 7607(d)(4)(B)(i). In summary, anything of significance relating to the formulation of the rule must be placed in the docket. The docket must be publicly available. Id. § 7607(d)(4)(A).

Section 307(d)(5) states:

In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the record of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information. Id. § 7607(d)(5). The authors of this section were determined to see that each proposed rule would be fully exposed to public scrutiny and criticism and to ensure that the Administrator would carefully consider all significant critical analyses. To that end, each promulgated rule must contain a statement of basis and purpose, and the reason for any "major changes" from the proposed rule must be discussed. Id. § 7607(d)(6)(A). Moreover, a response must be made to "each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period," id. § 7607(d)(6)(B), and the promulgated rule must be based solely on information in the docket. Id. § 7607(d)(6)(C).

Section 307 does away with any Vermont Yankee problem, see Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519 (1978), since the procedures required, to the extent they exceed APA requirements, are imposed by Congress rather than the courts.

211. Pedersen, supra note 206, at 88.
212. See notes 194-202 supra.
213. Pedersen, supra note 206, at 79.
214. Id. at 81.
parte communications, and the result dictates a remand of the coal NSPS to EPA for reconsideration under proper section 307 procedures.

C. EPA Improperly Accepted NCA Data and Analyses

EPA accepted NCA data and analyses after the close of the formal comment period, without reopening the record for further public comment. These data and analyses were considered by the Agency prior to promulgation of the revised rule and EPA’s conclusions paralleled those of NCA. The use of this material in the absence of public scrutiny violates the procedural protections of section 307.

The close of the comment period is significant in both administrative practice and judicial review. The basic principle is that participants in a rulemaking should have a reasonable opportunity to challenge facts considered by the agency in developing rules. The


216. The NCA data and analyses concerned the effect on development of high-sulfur coal reserves of a ceiling lower than 1.2 pounds per million BTU’s. EDF Brief, supra note 118, at 15. They first surfaced at the meeting of April 5, 1979. Id. at 16. Since the two environmental groups represented at the meeting had never before seen either this material or the results of EPA’s Phase 3 analysis, they were able only to scan the studies and question NCA’s assumptions. Id. Because the comment period was not formally reopened, the public had no effective notice or opportunity to comment on either of these analyses. See notes 227-45 infra and accompanying text.

EDF and NRDC were able to submit comments jointly two weeks after the meeting. These comments, however, were based only on the summary reports that NCA had prepared; the groups did not have access to the raw data on which the summaries were based, the method NCA used to gather and analyze the data, or the assumptions underlying those methods. Both groups questioned the propriety of including this information (and the groups’ rebuttal) in the record at all, and they emphasized that their response was “hurried and limited.” Letter from Robert J. Rauch, EDF Staff Attorney, to Douglas M. Costle, EPA Administrator (Sept 5, 1979) (responding to points raised by NCA in response to EDF’s petition for reconsideration).

After the April 5 meeting, NCA provided the Agency with further information concerning the conservative nature of utility coal buying practices, a point which influenced the Administrator’s final conclusions. See Reconsideration Denial Opinion, supra note 173, at 8,213; 44 Fed. Reg. 33,580, 33,596 (1979) (preamble to final rule).

217. EDF Brief, supra note 118, at 18.

218. According to EPA, its conclusions concerning coal reserve impacts were “in close agreement” with those of NCA, but were developed independently. Reconsideration Denial Opinion, supra note 173, at 8,213. At no time during the April 5 meeting, however, did EPA cease defending a 0.55 pound ceiling. EDF Brief, supra note 118, at 25. In addition, about one week after the meeting a key EPA staff member wrote a memorandum highly critical of the NCA data, rejecting many of NCA’s assumptions and arguments and reaffirming the analysis supporting a 0.55 pound per million BTU’s emission ceiling. Id. at 25-27. There was no indication then that EPA would relax its position on the ceiling. Id. at 27.

219. K. DAVIS, supra note 90, § 6.17, at 530. This concept was formulated by the District of Columbia Circuit in Portland Cement Association v. Ruckelshaus, 486 F.2d 375, 393 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974), which involved EPA emission standards and similar procedural irregularities: “It is not consonant with the purpose of a rulemaking procedure to promulgate rules on the basis of . . . data that, [in] critical degree, is known only to the agency.” 486 F.2d at 393. The court went on to state that information should generally be disclosed as to the basis for a proposed rule at the
framers of section 307(d) incorporated this principle through a defined comment period and procedural safeguards. The comment period forces parties with new or overlooked facts and arguments to present them for agency and public response substantially before promulgation of the final rule. For example, section 307(d)(3) requires that EPA "specify the period available for public comment." Only "written comments and documentary information . . . received from any person . . . during the comment period" may be included in the rulemaking docket. Moreover, section 307(d)(6)(B) stipulates that EPA need only respond to oral and written comments, criticisms, and data that are submitted during the comment period. Finally, Congress required that those seeking review of a rule or procedure raise objections during the comment period unless it is either "impracticable" to do so or the grounds for objection arise after the comment period and are centrally relevant to the outcome of the rule.

These elaborate requirements pertaining to the comment period clearly express Congress' intent to limit public submissions to that period and belie the proposition that the Agency may continue to accept public comments and data without extending the comment period. No purpose would exist for specifying a comment period if EPA could accept public submissions at any time before the promulgation date. Furthermore, the procedural safeguards focus on the comment period, indicating a desire by Congress to guarantee notice and an opportunity for adversarial discussion of incoming facts and arguments. Were the Agency to abandon the congressional mandates of section 307(d),
public participation, agency decisionmaking, and judicial review would suffer. 227

Case law strongly supports a rule disallowing unrestricted ex parte contacts. In the leading opinion on ex parte communications during informal rulemaking under the APA, Home Box Office, Inc. v. FCC, 228 an amicus brief charged that FCC had entertained numerous ex parte contacts during the promulgation of certain rules. The Court of Appeals for the District of Columbia Circuit concluded that these contacts were improper on four grounds. First, where an agency relies on private discussions in framing a final rule, statutorily prescribed procedures for public comment and discussion become meaningless. 229 Second, ex parte contacts interfere with judicial review, since information considered by the agency does not appear in the record. 230 Third, the absence of adversarial discussion, which may illuminate biased, incomplete, or inaccurate assertions of fact or opinion, harms both agency decisionmaking and judicial review. 231 Finally, where a proceeding involves "conflicting private claims to a valuable privilege," 232 ex parte communications are inconsistent with "fundamental notions of fairness implicit in due process and with the ideal of reasoned decision-

227. The Agency would have insufficient time to consider and respond to all material comments, the public would have no opportunity effectively to participate, and the court would have no guide to what material the Agency did and did not consider. See Pedersen, supra note 206, at 81; [1977] U.S. CODE CONG. & AD. NEWS at 1398.


229. 567 F.2d at 53-54.

230. Id. at 54.

231. Id. at 55.

232. Id. The court relied on its decision in Sangamon Valley Television Corp. v. United States, 269 F.2d 221 (D.C. Cir. 1959) in which it vacated and remanded an FCC order that had allocated television channels geographically following several ex parte contacts with the successful applicants. The court based its decision on the ground "that whatever the proceeding may be called it involved not only allocation of TV channels among communities but also resolution of conflicting private claims to a valuable privilege, and that basic fairness requires such a proceeding to be carried on in the open." 269 F.2d at 224.

Judge MacKinnon, in his special concurrence in Home Box Office, would have restricted the ex parte doctrine to cases involving competing private claims to a valuable privilege or selective treatment of competing business interests of great monetary value. 567 F.2d at 64. See Action for Children's Television v. FCC, 564 F.2d 458 (D.C. Cir. 1977). See text accompanying notes 235-39 infra.

The parties to the NSPS revision proceedings represent interests broader than those at stake in traditional two-party litigation. Nevertheless, the standard-setting in this case may be analogized to Home Box Office since the environmental groups and industry are competing for limited incompatible privileges—the enjoyment of clean air on the one hand and the emission of pollutants on the other.
making on the merits.”

A different panel of the District of Columbia Circuit later limited the reach of *Home Box Office* by refusing to apply it retroactively. The court also declared in dictum its intent to limit ex parte contacts in informal rulemakings only where “conflicting private claims to a valuable privilege” are involved. Nonetheless, neither this panel nor any of the other panels in several more recent cases concerning ex parte contacts has overruled *Home Box Office*. In fact, in *U.S. Lines, Inc. v. Federal Maritime Commission*, the court relied on the reasoning in *Home Box Office* to remand an order to the Federal Maritime Commission, specifically noting that the case did not involve the resolution of competing private claims. Rather, the holding was based on the “fundamental proposition” that “ex parte communications and agency secrecy as to their substance and existence serve effectively to deprive the public of the right to participate meaningfully in the decisionmaking process.” The court also noted that ex parte contacts foreclose effective judicial review.

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233. 567 F.2d at 56.
235. *Id.* at 474-75. The court was referring only to informal rulemaking under the APA, where no more stringent procedures were contained in the Agency's organic statute.
237. 584 F.2d 519 (D.C. Cir. 1978).
238. *Id.* at 539.
239. *Id.* at 540.
240. *Id.* at 541-42. Commenting on the ex parte communications in this case, some of which were reduced to memoranda and entered in the record and some of which were not, the court stated:

To be sure, while we do not know the precise content of the agency communications or what was revealed of them to the Commission by its staff, we have some idea of the substance of the communications from the memorandum excerpted in the joint appendix. This memorandum, however, hardly provides a substitute sufficient to allow for the "searching and careful" judicial inquiry required by *Overton Park*. Moreover, even if the detailed contents of the *ex parte* contacts were revealed by the agency on judicial review, we would still be deprived of the benefit of an adversarial discussion among the parties. . . . And adversarial comment is particularly critical where ex parte communications are made by a party interested in securing [favorable agency action]. . . .

As the court in *U.S. Lines* noted, an agency may set a reasonable deadline for receipt of public comments and arguments, since argument and counterargument cannot last indefinitely.\textsuperscript{241} Once the deadline has passed, however, the agency may not hold secret meetings with any of the parties, thereby depriving the public of an opportunity to rebut.\textsuperscript{242} The agency is obliged to guard against ex parte contacts.\textsuperscript{243} In the coal NSPS case, EPA received important data from and held several meetings with representatives of NCA after the Agency’s comment period had ended.\textsuperscript{244} Under *U.S. Lines*, EPA should have disclosed the substance of these communications to the public and officially reopened the comment period for adversarial discussion.\textsuperscript{245}

**D. EPA Failed to Provide Transcripts of Oral Presentations**

Closely tied to EPA’s failure to reopen the comment period for public response is its failure to provide transcripts of oral presentations by NCA, Senator Byrd, and members of the administration.\textsuperscript{246} Without these transcripts, or at least detailed summaries that disclose the substance of the oral presentations, reopening the comment period would be a meaningless gesture; the public and the court would be left uninformed of what occurred at those meetings.

The primary goal of the 1977 amendments to section 307 was the construction of a complete record for public and judicial scrutiny.\textsuperscript{247} The record must include a transcript of any oral presentation\textsuperscript{248} as well as a transcript of public hearings, if any, and other documents of central relevance to the rulemaking.\textsuperscript{249} Although it would be unreasonable to require every casual conversation among interested parties and agency officials to be recorded, any oral presentation concerning matters of major significance to the outcome of the rule should be entered in the record verbatim.\textsuperscript{250}

\textsuperscript{241} 584 F.2d at 541 n. 62.

\textsuperscript{242} Id.

\textsuperscript{243} Id. at 542-43.

\textsuperscript{244} See note 8 *supra* and accompanying text. The relevance of some of the contacts was admitted. For example, as a result of the April 5, 1979 meeting between EPA, NCA, and others “the Administrator revised his assessment of the state-of-art coal cleaning technology.” 44 Fed. Reg. 33,580, 33,596 (1979). EPA goes so far as to concede that “the comment period never really ended until just days before the rule was promulgated . . . [and] EPA continued to hear from all persons representing all interests.” EDF Brief, *supra* note 118, at 41-42 (quoting EPA’s Response to EDF’s Reply to EPA’s Opposition to EDF’s Motion for Leave to Obtain Discovery, May 19, 1980, at 3-4).

\textsuperscript{245} 584 F.2d at 543.

\textsuperscript{246} See notes 132-53 *supra* and accompanying text.

\textsuperscript{247} See notes 209-11 *supra* and accompanying text.


\textsuperscript{250} The House report discusses the rule of reason to be used in entering written or oral material in the record: “The agency should include in the record only those documents . . .
In denying reconsideration, the Administrator argued that section 307(d)(5)(iii) requires only a transcript “of the public hearings on a proposed rulemaking” and does not require a transcript of all discussions by agency officials with “persons outside the Agency.” This reasoning, however, is not supported by the language, history, or purpose of the statute. Section 307(d)(5) contains no language limiting its scope to public hearings, nor does it restrict the types of persons or conversations to which the transcript requirement applies. Both the statute and the policy expressed in the legislative history imply that any oral presentation that is relevant to the rulemaking outcome should be placed in the record.

This issue arose in U.S. Lines. Although the court had some idea of the substance of the ex parte communications in that case from a memorandum excerpted in the record, it found that the memorandum was insufficient for the “searching and careful” judicial inquiry required by the Supreme Court in Citizens to Preserve Overton Park v. Volpe. Furthermore, the court held that even if the ex parte contacts were revealed in detail during judicial review, principles of accuracy and fairness would require opportunity for public comment on those which are of genuine material relevance to the rule . . . and these central documents should where necessary cite or summarize, and place in perspective, less relevant documents on which they in turn rely.” 1977 HOUSE REPORT, supra note 40, at 319-20, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1398-99. In §§ 307(d)(4)(B), (d)(7)(B), and (d)(8) of the Act, the phrase “of central relevance to the rulemaking” is used to describe which documents must be placed in the docket, which objections must be considered in a separate proceeding, and which errors may support judicial invalidation of a rule. 42 U.S.C. § 7607(d)(4)(B), (d)(7)(B), (d)(8) (Supp. II 1978). In § 307(d)(6)(B), the word “significant” describes the oral or written comments and new data to which the Administrator must respond. Id. § 7607(d)(6)(B). No such modifier accompanies the 307(d)(5)(iii) transcript requirement, but it seems safe to assume that a similar rule of reason should be applied. 42 U.S.C. § 7607(d)(5)(iii).

251. Reconsideration Denial Opinion, supra note 173, at 8,214.

252. The Administrator apparently failed to distinguish between § 307(d)(4)(B)(i), which requires that “[t]he transcript of public hearings, if any, on the proposed rule shall also be included in the docket,” and § 307(d)(5), which states simply that “the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments . . . in addition to . . . written submissions; [and] . . . a transcript shall be kept of any oral presentation.” 42 U.S.C. § 7607(d)(4)(B)(i), (d)(5) (Supp. II 1978). Congress knew what a public hearing was, but used the broader term “oral presentation” in § 307(d)(5), with no qualifying language or reference to public hearings. Id. § 7607(d)(5).

253. See notes 207 & 250 supra. To allow EPA to avoid placing transcripts of significant oral presentations in the record would prevent the construction of a “clearly defined record on which . . . public comments and judicial review” could be based. 1977 HOUSE REPORT, supra note 40, at 318, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1397. It would also greatly hinder the court in determining whether the § 307(d)(6)(C) prohibition against basing the final rule in any part on information or data not in the docket had been violated. See notes 254-59 infra and accompanying text.


contacts. Where private conversations and secret arguments are not fully revealed to the public, "the exercise of permitting public comment and response by interested parties . . . is nothing more than a sham."257

In the critical stages of the NSPS revision process, several parties made important oral presentations to EPA concerning the potential preclusion of high-sulfur coal reserves by a stringent standard, the conservative attitude of utilities, and the advantages of "dry scrubbing" systems.258 Critics also allege that some of the oral presentations involved political pressure on the Agency to relax the proposed standard.259 These circumstances, particularly the latter, underscore the importance of the section 307(d)(5)(iii) transcript requirement. Since transcripts cannot be prepared in this case, the court should require EPA to place the contents of all potentially significant postcomment period oral presentations in the record, supplementing the detail of existing memoranda to the best of its ability.

E. Undue Political Pressure Reduced the Appearance of Impartiality

Comments, arguments, and supplementary information from Members of Congress concerning proposed rules may be desirable during the comment period; such communications following the comment period, however, are detrimental to the proceeding, for the reasons already described.260 Moreover, direct or indirect threats of reprisal,261 coupled with Congress' implicit power to influence agency decisionmakers' tenure and salary,262 may violate due process.263 Where section 307(d)(6)(C) of the Clean Air Act prohibits basing a rule on information not in the record,264 the exercise of political influence at

256. 584 F.2d at 539, 542-43.
257. Id. at 539.
258. See notes 132-41 & note 216 supra and accompanying text.
259. See notes 177-82 supra and accompanying text.
260. See note 253 supra & notes 261-90 infra and accompanying text.
261. See text accompanying notes 219-45 supra.
263. See Pillsbury Co. v. FTC, 354 F.2d 952, 963 (5th Cir. 1966).
264. Id. at 963. The Pillsbury court declared that the participants in adjudication have the right to an appearance of impartiality, and that legislative interference in agency functioning destroys the integrity of the administrative process. Id. at 964.
265. 42 U.S.C. § 7607(d)(6)(C) (Supp. II 1978). The Administrator must base the rule on the criteria specified in § 111 of the Act, id. § 7411(a)(1)(C): (1) the degree of emission reduction achievable through (2) the "best" system of continuous emission reduction that (3) has been "adequately demonstrated," in light of (4) the cost of achieving such emission reduction and (5) any nonair quality health and environmental impacts and energy requirements of such technology. Political threats are not on Congress' list of relevant considerations. Nonetheless, once political considerations become materially relevant to the rule,
private meetings may pose a major threat to the integrity of the rulemaking proceeding.\textsuperscript{266}

In \textit{Pillsbury Co. v. FTC},\textsuperscript{267} the Fifth Circuit examined political influence over a Federal Trade Commission proceeding that had produced an order requiring Pillsbury to divest certain assets. While the quasi-judicial proceeding was in progress, two of the four Commissioners were called to testify on the case before a Senate subcommittee and were asked many probing questions.\textsuperscript{268} Although neither Commissioner was threatened with reprisal for his views, the court held that Pillsbury had been deprived of due process because the subcommittee's intense criticism of the decisionmakers' handling of the case had "sacrifice[d] the appearance of impartiality."\textsuperscript{269}

Although the court in \textit{Pillsbury} focused its holding on the quasi-judicial aspect of the proceeding, more recent decisions have been less willing to distinguish an agency's rulemaking and adjudicative functions. For example, in \textit{D.C. Federation of Civic Associations v. Volpe},\textsuperscript{270} the District of Columbia Circuit stated that "the underlying problem cannot be illuminated by a simplistic effort to force the Secretary's action into a purely judicial or purely legislative mold."\textsuperscript{271} The judges differed on whether a threatened reduction in funding had influenced the Secretary of Transportation to approve a bridge in Washington, D.C.\textsuperscript{272} Nonetheless, Judge Fahy concurred in Judge Bazelon's statement of "the controlling principle of law: namely that, the decision would be invalid if based in whole or in part on the pressures emanating from the [legislator]."\textsuperscript{273} Judge Bazelon strongly believed that, even if the Secretary had taken every formal step required by statute, the intrusion of extraneous pressure "into the calculus of considerations on which the Secretary's decision was based" would require a remand

\textsuperscript{266} See EDF Brief, \textit{supra} note 118, at 17-18.
\textsuperscript{267} 354 F.2d 952 (5th Cir. 1966).
\textsuperscript{268} The questions were so intrusive and demanding that one Commissioner felt obliged to disqualify himself for the rest of the proceeding. \textit{Id.} at 963.
\textsuperscript{269} \textit{Id.} at 964. The court referred to Congress' external influence over agency decisionmakers "inherent in Congressional control over tenure and salary." \textit{Id.} at 963.
\textsuperscript{270} 459 F.2d 1231 (D.C. Cir.), cert. denied, 405 U.S. 1030 (1972).
\textsuperscript{271} \textit{Id.} at 1247. The court ruled that because the Secretary was not required to base his decision solely on a formal record established at a public hearing, the decision was not "judicial." \textit{Id.} at 1246-47. On the other hand, since Congress had established the boundaries within which his discretion could operate, the decision was not purely "legislative." \textit{Id.} at 1247. The principle relied upon was that "[i]f, in the course of making his decision, [the Secretary] took into account 'considerations that Congress could not have intended to make relevant,' his action proceeded from an erroneous premise and his decision cannot stand." \textit{Id.} (footnote omitted).
\textsuperscript{272} \textit{Id.} at 1246.
\textsuperscript{273} \textit{Id.}
for reconsideration.\textsuperscript{274}

In a relatively recent case, \textit{Koniag, Inc. Village of Uyak v. Andrus},\textsuperscript{275} the District of Columbia Circuit inquired into a letter sent by a Member of Congress to the Secretary of the Interior two days before the Secretary determined that several native Alaskan villages were ineligible to obtain land and revenues under the Alaska Native Claims Settlement Act.\textsuperscript{276} The letter requested a postponement of the decision pending a review by the Comptroller General, because eligibility requirements had been misinterpreted and certain unspecified villages should not have been made eligible.\textsuperscript{277} The court decided that the letter compromised the Secretary's appearance of impartiality and mandated for reconsideration.\textsuperscript{278}

In the coal NSPS case, Administrator Costle met with Senator Byrd and NCA representatives on at least two occasions after the public comment period had ended.\textsuperscript{279} Except for two extremely brief memoranda,\textsuperscript{280} one of which noted that the Senator "expressed his opinion that . . . an emission ceiling which would preclude the use of coal reserves would cause him great concern,"\textsuperscript{281} and media reports alleging that the Senator had threatened to withhold sup-

\textsuperscript{274} 459 F.2d at 1245-46. The court ordered a remand in \textit{Volpe}: [W]e [do not] mean to suggest that Secretary Volpe acted in bad faith or in deliberate disregard of his statutory responsibilities. He was placed, through the action of others, in an extremely treacherous position. Our holding is designed, if not to extricate him from that position, at least to enhance his ability to obey the statutory commands . . . . 459 F.2d at 1249. The court held that on remand the Secretary must make "new determinations based strictly on the merits and completely without regard to any consideration not made relevant by statute," \textit{id.} at 1246, thereby intending to insulate him from legislative pressures. \textit{id.} at 1249.

The court in \textit{Texas Medical Ass'n v. Mathews}, 408 F. Supp. 303 (W.D. Tex. 1976), reached a similar result based on the reasoning in \textit{Volpe}. A policy shift concerning the number of Professional Standard Review Organization (PSRO) areas that the Department of Health, Education, and Welfare (HEW) would allow in Texas had occurred literally overnight, contradicting an earlier policy statement and oral commitment by the PSRO Director. \textit{id.} at 308. This sudden reversal had followed a late-night meeting between the PSRO Director, Senator William Bennett (who had sponsored the PSRO legislation), and Jay Constantin, Senior Staff Member of the Senate Finance Committee. \textit{id.} at 309. The court remanded the issue to HEW for reconsideration, suggesting that the Agency develop an inclusive record to inhibit external influences and remove doubts about the true basis of the decision. \textit{id.} at 315.


\textsuperscript{279} See notes 145 & 152 \textit{supra} and accompanying text. 280. One memorandum contained a single short paragraph. The other was 49 words long. See notes 145 & 152 \textit{supra} and accompanying text. 281. EDF Brief, \textit{supra} note 118, at 18 (quoting EPA memorandum, docket number IV-E-13).
port for several important administration programs if EPA did not relax the standard, there is no evidence of what was said at those meetings. A meeting to discuss only facts probably would not have required the personal attendance of Costle, Stuart Eizenstat, and Byrd at a meeting after normal business hours, particularly when the material presented by the NCA representatives did not differ from that already presented to, and criticized by, the Agency. EPA has taken the position that, even if its consideration of the views of Members of Congress was improper, the procedural “error” was not significant. Nonetheless, EPA has refused to divulge details of the ex parte meetings that took place between EPA officials, administration officials, NCA representatives, and Byrd.

In both *D.C. Federation of Civic Associations v. Volpe* and *Texas Medical Association v. Mathews*, the absence of a sufficient record forced the district courts to take testimony from the administrative decisionmakers on the influence of legislative pressure on their decisions. In the coal NSPS case, because the court lacks evidence of whether any political pressure was actually applied at the meetings in question, similar testimony or affidavits should be required to supplement the record. If the Administrator in any way based his decision on considerations not enumerated in section 111 or information not placed in the docket, his action is “not in accordance with law,” and should be invalidated.

**F. EPA Failed to Reopen the Record After a Major Further Investigation**

Much of the analysis underlying the final rule was developed by EPA through ex parte contacts and continuing investigation after the

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283. EDF Brief, *supra* note 118, at 28.
285. EDF Brief, *supra* note 118, at 47-48, 66. In addition to participating in at least two meetings with Senator Byrd, EPA officials received numerous letters from other Members of Congress who opposed the standard, including a copy of a letter sent by 25 Senators from coal producing states to President Carter. See notes 142-44 & 151 *supra* and accompanying text. This congressional persuasion after the comment period damages the Administrator’s appearance of impartiality as much as the face-to-face meetings, particularly since so many coal industry comments were funneled through congressional offices. See note 142 *supra* and accompanying text.
290. See *D.C. Federation of Civic Ass’ns v. Volpe*, 459 F.2d at 1246-47; *Texas Medical Ass’n v. Mathews*, 408 F. Supp. at 305.
close of the comment period.\textsuperscript{291} Subjects of continued revision by the Agency included the impact of variable controls on development of high-sulfur coal reserves\textsuperscript{292} and the costs and benefits of "dry scrubbing" technology.\textsuperscript{293} Of these two matters left unexposed to adversarial comment, the Agency's postcomment period focus on dry scrubbing technology was the most crucial.\textsuperscript{294}

\textsuperscript{291} The Phase 3 macroeconomic analysis of the standard and supporting data, incorporating consideration of dry SO\textsubscript{2} scrubbing and a nonuniform percentage reduction requirement with a 70\% minimum reduction requirement, were entered into the record after the close of the public comment period. Reconsideration Denial Opinion, \textit{supra} note 173, at 8,215-16.

\textsuperscript{292} The Phase 2 analysis of the economic, environmental, and energy impacts associated with various alternative SO\textsubscript{2} standards examined 33, 50, and 90\% control options and was published in the Federal Register on December 8, 1978. 43 Fed. Reg. 57,834 (1978). The Phase 3 analysis introduced a 70\% minimum control option, along with figures concerning the application and cost of dry SO\textsubscript{2} scrubbing technology. Preamble to Final New Stationary Performance Standards for Electric Utility Steam Generating Units, 44 Fed. Reg. 33,580, 33,603 (1979) [hereinafter cited as Preamble to Final Rule]. This analysis examined environmental, economic, and financial impacts and effects on energy production and consumption, including geographic breakdowns of coal production and consumption. \textit{See} Reconsideration Denial Opinion, \textit{supra} note 173, at 8,216-17; Preamble to Final Rule, \textit{supra}, at 33,603.

\textsuperscript{293} One of the more effective designs for dry SO\textsubscript{2} scrubbing involves the use of a spray dryer and baghouse. Preamble to Proposed Standards of Performance for New Stationary Sources; Electric Utility Steam Generating Units, 43 Fed. Reg. 42,154, 42,160 (1978) [hereinafter cited as Preamble to Proposed Rule]. The spray dryer, like a wet scrubber, is used with lime, soda ash, or other reactants to scrub SO\textsubscript{2} from the flue gases, but a minimal use of water in the spray dryer means that no reheating of the gases is required. \textit{Id.} The baghouse collects particulate matter, including SO\textsubscript{2} reactants. Several portions of the preamble to the final rule concern the costs and savings associated with dry versus wet controls under various assumptions. \textit{See}, \textit{e.g.}, Preamble to Final Rule, \textit{supra} note 292, at 33,606-07.

\textsuperscript{294} EPA contends that the impact of the standard on development of high-sulfur coal reserves was an issue throughout the rulemaking, Reconsideration Denial Opinion, \textit{supra} note 173, at 8,212, even though the Agency concluded shortly after the comment period that "additional analysis [of the issue] was needed to support the final emission limitation" and that the new approach "introduced a major refinement to the analysis previously performed." \textit{Id.} at 8,213. This major refinement concerned the effects of a nonuniform control standard (the "sliding scale") and dry SO\textsubscript{2} scrubbing. \textit{See} notes 291 \& 292 \textit{supra}.

EPA also argued that dry SO\textsubscript{2} scrubbing had received adequate public scrutiny because the preamble to the proposed rule had identified dry scrubbing as an alternative to wet FGD systems and because some individuals and organizations had submitted written and oral comments favoring a variable control standard because it would encourage development of dry scrubbing technology. Reconsideration Denial Opinion, \textit{supra} note 173, at 8,216. Only one-half of one column of the 30-page preamble discussed one dry scrubbing design and the option of coal washing. Preamble to Proposed Rule, \textit{supra} note 293, at 42,160. It is disingenuous of the Administrator to argue that the technology received the public scrutiny and adversarial comment to which it should have been subjected if it was the basis for the final NSPS. \textit{See} Home Box Office, Inc. v. F.C.C., 567 F.2d 9, 35-36 (D.C. Cir.), \textit{cert. denied}, 434 U.S. 829 (1977); Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 392-93 (D.C. Cir. 1973), \textit{cert. denied}, 417 U.S. 921 (1974). It would be an intolerable burden on the public comment process if those seeking to respond to proposed rules had to comment on every technology mentioned in the record as if it were to form the basis for the standard. Once EPA began seriously considering dry SO\textsubscript{2} scrubbing as the BACT on which the standard would be based, it should have reopened the record for written and oral public comment.
The legislative history indicates that section 307(d)(5)\textsuperscript{295} of the amended Clean Air Act was intended to expand public hearing requirements.\textsuperscript{296} The House report states specifically that "a hearing must . . . be held whenever legitimate policy questions are still open. The statute requires an opportunity to present 'views and arguments' in all such cases."\textsuperscript{297} Completely apart from the issue of ex parte contacts, the NSPS proceeding should be reopened for public comment on the significant new policy choices—the technological basis of the standard—and the substantiating data developed after the comment period.

The fundamental principle in considering important new policies is the same as that for ex parte communications: "It is not consonant with the purpose of a rulemaking proceeding to promulgate rules on the basis of inadequate data, or on data that [in] critical degree, is known only to the agency."\textsuperscript{298} The District of Columbia Circuit enunciated this principle in \textit{Portland Cement Association v. Ruckelshaus},\textsuperscript{299} which invalidated a rulemaking proceeding because EPA denied the petitioners timely access to certain test results and methodologies that supported the Agency's decision. The court held this to be a "critical defect," particularly since the Agency had subsequently failed to comment on apparently legitimate criticisms of those methodologies entered in the record.\textsuperscript{300}

The law review article that inspired section 307(d) discusses situations similar to the coal NSPS case, in which important information is developed after the comment period.\textsuperscript{301} Its author proposes, in reference to development of a complete record, that

all documents which became available after the proposal had been published and which the agency decided were of central relevance to the rulemaking would likewise be placed in the file. If the documents were important enough, the present requirements of \textit{Portland Cement Ass'n v. Ruckelshaus} [decided four years prior to the 1977 amendments,] might call for an

\begin{align*}
295. & \quad \text{42 U.S.C. \S 7607(d)(5) (Supp. II 1978).} \\
& \quad \text{Ad. News at 1400.} \\
297. & \quad \text{Id. at 321, reprinted in 1977 U.S. Code Cong. & Ad. News at 1400.} \\
298. & \quad \text{Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 393 (D.C. Cir. 1973), cert.} \\
& \quad \text{denied, 417 U.S. 921 (1974).} \\
299. & \quad \text{Id.} \\
300. & \quad \text{Id. at 392. While cautioning that it was not establishing any broad principle that} \\
& \quad \text{EPA must respond to every comment on the validity, formulating methodology, or scientific} \\
& \quad \text{basis of its standards, the court reminded the Agency that it must take a "hard look" at the} \\
& \quad \text{problems it faces, including petitioner comments that are "significant enough to step over a} \\
& \quad \text{threshold requirement of materiality." Id. at 393-94; see 1 K. Davis, supra note 90, \S 6.26,} \\
& \quad \text{at 578. Cf. B.F. Goodrich Co. v. Dept' of Transportation, 541 F.2d 1178, 1184 (6th Cir.} \\
& \quad \text{1976), cert. denied, 430 U.S. 930 (1977) (APA requires only basic data, not all background} \\
& \quad \text{information used by agency, to be published for public comment). See also 1 K. Davis,} \\
& \quad \text{supra note 90, \S 6.17, at 530.} \\
301. & \quad \text{See note 206 supra and accompanying text.}
\end{align*}
extension of the comment period, or even for the proposal of an amended rule.\textsuperscript{302}

This reasoning would require that the coal NSPS be remanded even without the specific mandate of the 1977 amendments.

Other courts have agreed with the \textit{Portland Cement} holding.\textsuperscript{303} Most recently, in \textit{National Crushed Stone Association v. EPA},\textsuperscript{304} the Fourth Circuit remanded EPA regulations because data that the Agency developed after the close of the comment period and used to support the final rule "were not made available to the industry for study and analysis . . . . At the time the regulations were being formulated, only EPA knew about the data in detail."\textsuperscript{305} The court focused on the lack of opportunity for the petitioners and the public to comment on the postcomment period data.\textsuperscript{306}

EPA's determination of the "best available control technology" (BACT) underlies any new source performance standard. The standard must reflect "the degree of emission reduction achievable through the application of the best system of continuous emission reduction . . . the Administrator determines has been adequately demonstrated."\textsuperscript{307} While the record was open for comment, EPA primarily focused on "wet scrubbing" flue gas desulfurization technology as the basis for the coal NSPS.\textsuperscript{308} After the comment period, the Agency shifted its focus to dry scrubbing, basing the nonuniform percentage reduction requirement upon that technology.\textsuperscript{309} Shifting the technolog-

\textsuperscript{302} Pedersen, \textit{supra} note 206, at 79.

\textsuperscript{303} Home Box Office, Inc. v. F.C.C., 567 F.2d at 35-36; Du Pont de Nemours & Co. v. Train, 541 F.2d 1018, 1026 (4th Cir. 1976), \textit{modified on other grounds}, 430 U.S. 112 (1977) (agency engaged in rulemaking must explicate fully its course of inquiry, analysis, and reasoning); National Asphalt Pavement Ass'n v. Train, 539 F.2d 775, 779 n.2 (D.C. Cir. 1976) (to have meaningful opportunity to comment, one must be aware of information finally relied upon by Agency); Appalachian Power Co. v. Environmental Protection Agency, 579 F.2d 846, 852-53 (4th Cir. 1978) (due process satisfied if Agency, by notice of other information made available reasonably in advance of hearing, apprises party of nature and basis of rule sufficiently to identify material issue for comment); cf. B.F. Goodrich Co. v. Dep't of Transp., 541 F.2d 1178, 1184 (6th Cir. 1976), \textit{cert. denied}, 430 U.S. 930 (1977) (APA requires only basic data, not all background information used by Agency, to be published for public comment).

\textsuperscript{304} 601 F.2d 111 (4th Cir. 1979), \textit{cert. granted}, 100 S. Ct. 1011 (1980).

\textsuperscript{305} \textit{Id.} at 117.

\textsuperscript{306} \textit{Id.} at 119.


\textsuperscript{308} See note 294 \textit{supra}. The Phase 1 and Phase 2 analyses assumed that utilities would use wet scrubbers only. Preamble to Final Rule, \textit{supra} note 292, at 33,603.

\textsuperscript{309} The Administrator found that a uniform percentage reduction requirement would have constrained the development of dry scrubbing technology, and that employing spray dryers could achieve 70% reduction in potential \textit{SO}\textsubscript{2} emissions on both low-sulfur alkaline and nonalkaline coals. Reconsideration Denial Opinion, \textit{supra} note 173, at 8,216. He was also influenced by public comments indicating that removal requirements higher than 70% would discourage the continued development of the technology, leading him to discount Sierra Club data on higher emission reduction levels. \textit{Id.}
ical basis for the standard should have resulted in a reopening of the comment period and the use of the other procedures specified in section 307(d). The choice of BACT is a key policy question in the setting of an NSPS. The Administrator, contrary to congressional intent, resolved this question without any adversarial public comment.

G. Judicial Review Under Section 307

Section 307(d) empowers the Court of Appeals for the District of Columbia Circuit to reverse the Administrator's denial of reconsideration on any of the four grounds discussed above. The acceptance of NCA data after the comment period, the absence of transcripts of several potentially crucial oral presentations, the political pressure from Senator Byrd, and the development of a substantially new technological basis for the standard are each sufficient to justify a remand of the coal NSPS to the Agency for reconsideration. Taken together, these procedural defects overwhelmingly indicate that a remand to EPA is the only proper result.

There is sufficient evidence of procedural errors to satisfy the section 307(d)(8) standard for invalidation of the rule: "substantial likelihood that the rule would have been significantly changed if such errors had not been made." After the April 5 meeting, EPA staff rejected many of NCA's policy arguments and concluded that the more stringent emission ceiling would have no significant economic impact. Prior to the April 23 meeting with Senator Byrd, the Agency was apparently committed to the stricter standard. When the preamble to the final rule was prepared, however, the Administrator admitted that postcomment period data and arguments submitted by the coal industry and its advocates had influenced his views.

Moreover, given adequate opportunity, the public could have challenged coal industry arguments. For example, data could have

310. Those procedural safeguards include an adequate opportunity to consider the agency proposal, "an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions," and a 30-day period following completion of the proceeding for submission of rebuttal and supplementary information. 42 U.S.C. § 7607(d)(5) (Supp. II 1978).
311. See notes 296-97 supra and accompanying text.
313. See part IV,C supra.
314. See part IV,D supra.
315. See part IV,E supra.
316. See part IV,F supra.
319. Id.
320. Preamble to Final Rule, supra note 292, at 33,596. See also Reconsideration Denial Opinion, supra note 173, at 8,213-14.
been presented on the use of adipic acid to improve wet scrubber efficiency. Adding adipic acid to the wet scrubbing process can consistently increase scrubber efficiency from about seventy-five percent to over ninety percent, at relatively little additional cost. This process will increase efficiency and permit emissions from all coals to be fully cleaned at a reasonable cost, thereby reducing the economic attractiveness of the dry scrubber. This conclusion undermines much of the Administrator's rationale for the nonuniform percentage reduction requirement.

Without the ex parte information and pressure from NCA and its political allies, there would have been no reason for EPA to alter its commitment to the stringent emission ceiling. Adversarial comment on the switch to dry scrubbing technology as the basis of the standard might have dissuaded the Agency from abandoning the full scrubbing requirement of the proposed percentage reduction requirement. Had EPA followed the procedural mandates of the Clean Air Act Amendments of 1977, the rule would likely have been significantly different. If the courts order reconsideration, renewed EPA attention to section 307(d) will guarantee sufficient documentation, notice, and adversarial discussion to satisfy congressional and judicial requirements of accuracy, fairness, and reviewability. Reconsideration may also result in an amended rule, as discussed in the next section.

V
SUBSTANTIVE ERRORS FROM PROCEDURAL DEFECTS

The revised NSPS is invalid on three substantive grounds. First, the nonuniform percentage reduction requirement unlawfully undermines several purposes of the 1977 amendments. Second, the nonuniform standard was selected to stimulate development of a specific new technology, dry scrubbing. Encouraging specific technologies is an impermissible objective under the Act. Third, the emission ceiling and the percentage reduction requirements are too lenient in light of available evidence. This section will briefly summarize arguments, developed by others, that support these objections.

321. EDF Brief, supra note 118, at 50-51. Prepared by EPA's principal contractor in adipic acid research, the report containing this data was not entered into the record until June 3, 1980 and was therefore completely left out of the decisionmaking process. See id. A later report confirms the success of adipic acid as a scrubber additive. Burbank and Wang, Test Results on Adipic Acid-Enhanced Lime/Limestone Scrubbing at the EPA Shawnee Test Facility—Second Report (Dec. 5, 1979). This report was also added to the record on June 3, 1980 at EDF's request. EDF Brief, supra note 118, at 52.

322. See generally Ayres & Doniger, supra note 120; Developments—Energy Law and the Environment, 8 Ecology L. Q. 725, 748 (1980) [hereinafter cited as Energy Developments].
A. The Nonuniform Percentage Reduction Requirement Undermines Congressional Inten\textsuperscript{323}

Congress revised the NSPS program in 1977 to promote technological development, emission reductions, and fairness.\textsuperscript{324} The revised NSPS fails to fulfill these goals. First, it perpetuates the unfair effects on competition that the original (1971) NSPS created within the coal industry and among the states.\textsuperscript{325} By allowing the emission limit to be met through the use of low-sulfur coal, the original standard gave an economic advantage to western coal companies.\textsuperscript{326} The nonuniform percentage reduction requirement maintains this regional economic disparity by requiring high-sulfur coal to be cleaned to a greater extent than low-sulfur coal.\textsuperscript{327} Similarly, the new standard continues to encourage utilities to locate power plants near low-sulfur coal supplies.\textsuperscript{328} This concentration of power plants may make it more difficult for Western States to meet national ambient air quality standards and will hasten the degradation of relatively pristine air to ambient standards.\textsuperscript{329}

\textsuperscript{323} Proponents of the nonuniform standard find legislative support in the language of the "Domenici clause," inserted in the 1977 conference report at the request of Senator Peter Domenici, which grants the Administrator authority to adopt a nonuniform percentage reduction requirement if the degree of nonuniformity does not undermine the basic purposes of the 1977 amendments to section 111. H.R. REP. No. 95-564, 95th Cong., 1st Sess. 121, 130 (1977), reprinted in [1977] U.S. CODE CONG. & AD. NEWS 1502, 1511. See Badger, New Source Performance Standard for Power Plants I: Consider the Costs, 3 HARV. ENVT'L L. REV. 48, 52, 60 (1979); Energy Developments, supra note 322, at 755-56. Senator Domenici felt that it might be unnecessarily costly to remove the same percentage of SO\textsubscript{2} from low-sulfur coals as from high-sulfur coals. 123 CONG. REC. 18,515 (1977). It may, however, be "less difficult and less costly to remove a given percentage of sulfur from low-sulfur coal than to remove the same percentage from high-sulfur coal." Ayres and Doniger, supra note 120, at 78 (emphasis in original). In any case, the nonuniform standard that EPA promulgated in June 1979 undermines several of the purposes of the amendments to section 111. See text accompanying notes 324-43 infra.

\textsuperscript{324} See note 45 supra and accompanying text.


\textsuperscript{326} Id.

\textsuperscript{327} EPA contends that any NSPS-induced shift to western coal will be inconsequential in light of expected increases in eastern coal production. Preamble to Final Rule, supra note 292, at 33,583, 33,609, table 4. The Agency also contends that the effect of variables such as labor costs, oil prices, electricity demand, severance taxes, and rail rates on local coal use is much greater than the effect of a variable control standard. [1978] 9 ENVIR. REP. (BNA) 543, 544.

\textsuperscript{328} Ayres & Doniger, supra note 120, at 78-79.

\textsuperscript{329} Id. The Interstate and Foreign Commerce Committee spent much effort and 74 pages of its report supporting the "prevention of significant deterioration" (PSD) policy. 1977 HOUSE REPORT, supra note 40, at 103-77, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1181-1256. The committee outlined the health, welfare, and economic bases for a strong PSD policy, id. at 105-37, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1183-1215, noting the evidence of potentially serious health effects from low levels of pollution, the need for a policy that assures orderly, long-term industrial and energy development, the need to protect States and regions from "environmental blackmail" by industrial sources,
Second, the revised NSPS does not minimize emissions from new sources. Congress intended that the standard minimize such emissions primarily to prevent further threats to public health or welfare from air pollution. Minimizing new emissions would also help the States meet national ambient air quality standards. By preserving air quality, an NSPS permits the construction of additional industrial facilities, thereby maximizing potential long-term economic growth. A uniform emission reduction would also encourage all utilities to burn high-sulfur coal, freeing low-sulfur coal for use in existing facilities for the need to protect air quality in national parks and monuments, and the need to protect States from uncontrolled emissions from sources in other States. Id. at 140, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1219.

The Administrator argued that "lower emission standards on new plants do not necessarily result in lower national sulfur emissions when total emissions from the entire utility system are considered." Preamble to Final Rule, supra note 292, at 33,607. This conclusion arises from the Agency's Phase 2 and Phase 3 economic modeling exercises. Id. at 33,603. The EPA model predicted that the nonuniform percentage reduction requirement would result in sulfur emissions nationwide "equal to or lower" than those resulting from uniform 90% control, at less expense and lower oil consumption. Id. A critical assumption underlying the model's prediction was that stricter controls would necessarily discourage utilities from building new plants and cause newer, "cleaner" capacity to be used less than under less strict controls. Id. The Sierra Club vigorously contested the validity of this and other Agency modeling assumptions concerning future oil prices and nuclear plant growth rates. Reconsideration Denial Opinion, supra note 173, at 8,217-18. Others have contended that even if the assumption is correct, lower nationwide emissions from a variable control standard result solely from EPA's faulty choice of an emission ceiling that is too high and therefore has no independent effect. Ayres & Doniger, supra note 120, at 81. A lower ceiling would eliminate the anomaly. Id. See notes 354-58 infra and accompanying text.

The following provisions demonstrate the health-protective nature of the Act: "The Administrator shall . . . publish . . . a list of categories of stationary sources. He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A) (Supp. II 1978). "In determining priorities for promulgating standards for categories of major stationary sources . . . , the Administrator shall consider — . . . (B) the extent to which each [emitted air] pollutant may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(f)(2)(B) (Supp. II 1978). These provisions reflect the precautionary nature of the Act and "the predominant value of protection of public health," and were designed to allow EPA to regulate before actual harm occurred. 1977 HOUSE REPORT, supra note 40, at 49, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1127. See Ayres & Doniger, supra note 120, at 74 n.63.

1977 HOUSE REPORT, supra note 40, at 105, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1183. The House Interstate and Foreign Commerce Committee noted that the National Academy of Sciences had recommended "mandatory use of best technology" on the grounds that even use of best available technology by new sources may be insufficient to prevent serious irreversible environmental damage in the foreseeable future. Id. at 191, reprinted in [1977] U.S. CODE CONG. & AD. NEWS at 1270. See text accompanying notes 54-57 supra.


Id. See Badger, supra note 323, at 61-62; Ayres & Doniger, supra note 120, at 79.
which retrofit of emissions controls is infeasible.\textsuperscript{335} Lastly, Congress intended power plants to install all necessary control technology at the time of construction to avoid costly retrofitting.\textsuperscript{336} By failing to minimize emissions, the revised NSPS does not preclude the imposition of additional controls in the future.\textsuperscript{337}

Encouraging the development of improved emission control technologies was a third purpose of the 1977 amendments.\textsuperscript{338} The BACT concept in the amendments requires that any technological improvements be reflected in a revision of the performance standard, thereby guaranteeing a market for the new technology.\textsuperscript{339} Even prior to the 1977 amendments, the courts emphasized that the Administrator may promote technology-forcing by setting a standard beyond current average performance.\textsuperscript{340} The revised NSPS, however, fails to force the development of new sulfur removal technologies that achieve “equal or better degrees of control”\textsuperscript{341} at “equivalent or lower cost, energy demand, and environmental impacts.”\textsuperscript{342} Instead, the new NSPS allows the use of a technology that removes only fifty to eighty-five percent of the SO\textsubscript{2} and operates with only low-sulfur coals.\textsuperscript{343} Since relatively few plants will be forced by their location and economics to burn high-sulfur coal, little demand will be created for more effective sulfur removal technologies.

\begin{itemize}
\item \textsuperscript{336} Id. at 185, reprinted in [1977] U.S. Code Cong. & Ad. News at 1264.
\item \textsuperscript{337} See note 332 supra.
\item \textsuperscript{338} The House report states: “[I]t is prudent public policy to require achievement of the maximum degree of emission reduction from new sources, while encouraging the development of innovative technological means of achieving equal or better degrees of control.” 1977 House Report, supra note 40, at 189, reprinted in [1977] U.S. Code Cong. & Ad. News at 1267-68 (emphasis added).
\item \textsuperscript{339} Id. at 186, reprinted in [1977] U.S. Code Cong. & Ad. News at 1265.
\item \textsuperscript{340} In Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974), the court endorsed EPA’s attempt to exercise the technology-forcing strategy of § 111 in the regulation of Portland cement plant emissions:

\begin{quote}
We begin by rejecting the suggestion of the cement manufacturers that the Act’s requirement that emission limitations be ‘adequately demonstrated’ necessarily implies that any cement plant now in existence may be able to meet the proposed standards. Section 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present, since it is addressed to standards for new plants. . . .
\end{quote}

Id. at 391. The court reaffirmed its position on technology-forcing in Essex Chemical Corp. v. Ruckelshaus, 486 F.2d 427, 433-34 (D.C. Cir. 1973), cert. denied, 416 U.S. 969 (1974), where it stated that an achievable standard was one “which is within the realm of the adequately demonstrated system’s efficiency and which, while not at a level that is purely theoretical or experimental, need not necessarily be routinely achieved within the industry prior to adoption.”

\item \textsuperscript{341} See note 338 supra.
\item \textsuperscript{343} See Preamble to Final Rule, supra note 292, at 33,594.
\end{itemize}
B. New Technologies May Not Be Stimulated By Nonuniform Standards

EPA established the nonuniform percentage reduction requirement to promote dry scrubbing. The encouragement of innovative technologies, however, is governed by section 111(j) of the Act, which allows the Administrator to waive existing pollution control requirements for sources planning to use certain control systems other than the one designated by EPA as “best available.” To qualify for a waiver, a proposed system must not be adequately demonstrated, but must be likely to “achieve greater continuous emission reduction than that required to be achieved under the standards of performance which would otherwise apply, or achieve at least an equivalent reduction at lower cost.” The nonuniform standard amounts to a waiver for a system demonstrated to be less effective than required by law, and is therefore prohibited by section 111(j). The adoption by EPA of regulations that permit performance below that which has already been achieved is inconsistent with the technology-forcing purpose of the Act. If EPA believes that the waiver-granting authority is too narrow and inflexible, the proper reform is a legislative amendment to section 111(j), not the adoption of a nonuniform percentage reduction requirement.

C. The Standard Is Too Lenient

Because significantly greater emission reductions and lower emission ceilings are feasible with existing wet scrubber technology, the revised NSPS does not require the “best technological system . . . which . . . has been adequately demonstrated,” and is therefore “in excess of statutory . . . authority.” EPA admitted that greater than ninety percent SO₂ removal was possible with high-sulfur coals and

344. *Id.* at 33,583.
346. If the proposed system were both adequately demonstrated and met the second requirement, it would serve as the basis for a new designation of BACT under section 111(g)(4), provided that at least one State Governor would apply for such a revision. 42 U.S.C. § 7411(g)(4) (Supp. II 1978).
348. Ayres & Doniger, *supra* note 120, at 77 n.78.
349. *Id.* at 79.
350. Section 111(j) requires an innovative technology to meet or exceed existing standards in order to obtain a trial run in a commercial plant. 42 U.S.C. § 7411(j)(1)(A)(2) (Supp. II 1978). In addition, the waiver lasts only four years from the date the facility begins operation, *id.* § 7411(j)(1)(E)(ii), a period that may be insufficient to amortize the initial capital costs of developing such a system. *See* Preamble to Final Rule, *supra* note 292, at 33,591.
claimed that the dry scrubbing technology could remove up to eighty-five percent of SO$_2$ from low-sulfur coal. Yet the promulgated standard requires only ninety percent removal from high-sulfur coals and only seventy percent removal from low-sulfur coals.

The statute requires that NSPS include both an emission ceiling and a minimum percentage reduction. In adopting this two-part standard, Congress must have intended that each part have an independent effect. For the emission ceiling to have such an effect, it must be low enough to require greater removal than the percentage reduction alone for plants burning high-sulfur coal. The 1.2 pound per million BTU's ceiling, however, is probably too high to require more control than the percentage reduction requirement alone.

EPA itself noted that a higher percentage reduction requirement would allow a lower emission ceiling without significantly affecting local high-sulfur coal reserves. The Agency refused to set a higher percentage reduction requirement in part because it claimed that "conservatism in utility perceptions of scrubber performance could create a significant disincentive against the use of [high-sulfur] coals and disrupt the coal markets in [the East, Midwest, and portions of Northern Appalachia]." Subjective indications of utility skepticism about scrubber performance are not, however, among the section 111 decision criteria. They also form a poor base from which to estimate impacts on high-sulfur coal reserves, particularly when existing data contradict utility perceptions.

An additional objection to the leniency of the standard is that EPA assigned too much importance to the local coal issue. Although the encouragement of local high-sulfur coal consumption was one of several goals of the 1977 amendments, it was of secondary importance in section 111, especially since such concerns were provided for elsewhere. It seems likely that, given EPA's commitment to a lower ceiling and uniform full scrubbing up to the April-May period of intense

354. *Id.* at 33,594.
355. 40 C.F.R. § 60.43a (1979).
356. Ayres & Doniger, *supra* note 322, at 67, 72-73. The percentage reduction requirement was added to § 111 in 1977 to remove any ambiguity concerning the need for a technological system of emission reduction. See text accompanying notes 39-40, 47-48 *supra*.
357. *Id.*
358. *Id.* at 72-73.
361. See notes 162 & 321 *supra* and accompanying text.
362. See note 45 *supra* and accompanying text.
363. Under § 125 of the Act, added by the 1977 amendments, the President or a State Governor (with the President's consent) can require local major stationary sources to use only locally or regionally available coal or coal derivatives where necessary to avoid significant local or regional economic disruption or unemployment. 42 U.S.C. § 7425 (Supp. II 1978).
lobbying and external pressure and the Agency's earlier analysis indicating little or no economic impact from a 0.55 pound ceiling, the preclusion of reserves argument is a rationalization for a decision reached on other grounds.

The lower percentage reduction requirement for low-sulfur coal is in excess of statutory authority. EPA claimed that dry scrubbing technology could remove up to eighty-five percent of SO\(_2\) yet without explanation set the removal requirement at seventy percent. The Sierra Club suggested that the Agency chose seventy percent as a compromise between the ninety percent uniform reduction requirement requested by public interest groups and the fifty percent requirement supported by the utility industry. Without evidentiary support, and perhaps only as a political compromise, the seventy percent standard is unlawfully arbitrary and capricious.

CONCLUSION

The chronology of the setting of the final NSPS reveals enormous

364. See notes 116-23 supra and accompanying text.
365. EDF Brief, supra note 118, at 27 (citing Memorandum from David Shaver, Office of Air Quality Planning and Standards, EPA, to William Drayton, Jr., Assistant Administrator for Planning and Management, EPA).
366. Id. at 27-28.
367. EPA only concluded that the 70% standard is "technically feasible" and makes dry scrubbing economically attractive relative to wet scrubbing for low-sulfur coal. Preamble to Final Rule, supra note 292, at 33,594-95.

Traditional "arbitrary or capricious" review, 42 U.S.C. § 7607(d)(9)(A) (Supp. II 1978), controls judicial scrutiny of the merits of the standard unless the standard is unconstitutional, id. § 7607(d)(9)(B), or the Administrator has acted outside his statutorily conferred discretion. Id. § 7607(d)(9)(C). Two of the substantive errors in the coal NSPS that are attributable to the choice of a nonuniform standard—undermining the purposes of the 1977 amendments and impermissibly stimulating dry scrubber development—are subject to the § 7607(d)(9)(C) standard of review, while the assertion that the standard is too lenient is reviewable under § 7607(d)(9)(A). The distinction may be unimportant, however, in light of the pervasiveness of "hard look" review and the tendency of courts to ignore "arbitrary or capricious" and "outside of statutory authority" standards in favor of a remand requiring consideration of all relevant factors, or better articulation or a more detailed statement of the basis for a particular decision. See Oakes, The Judicial Role in Environmental Law, 52 N.Y.U. L. Rev. 498, 509-12 (1977). Yet because "hard look" review does not explicitly incorporate the Overton Park requirement that the Administrator act within his statutorily conferred discretion, § 7607(d)(9)(C) has independent vitality and should be used by the Court of Appeals in this case in addition to the "arbitrary or capricious" standard.
pressures brought to bear on an agency made vulnerable by growing national discontent with government regulation. Indeed, the coal NSPS seems to have become a symbol of the growing confrontation between environmentalists and energy supply advocates. EPA could have used the procedural requirements of section 307(d) to shield itself from extraneous pressures. Instead, under the force of the "energy crisis," a weakening economy, and burgeoning antiregulation sentiments, the Agency surrendered to the coal industry lobby and its advocates in government. The resulting standard, born of EPA’s failure to observe congressionally mandated procedures, violates congressional intent as expressed in the Clean Air Act Amendments of 1977 and their legislative history.

The regulatory environment in 1980 differs markedly from that in 1970 or even 1977. Growing national concern with energy and burdensome governmental regulations has begun to overshadow the environmental protection goals to which we firmly adhered as recently as 1977. While the social context for regulation may have recently changed, the law has not. Congress, in response to growing evidence of significant sulfur-related health and environmental problems and the failure of the 1971 coal NSPS to achieve congressional goals of fairness, emission reduction, and technology forcing, established stringent requirements in the 1977 amendments for EPA to fulfill in revising the standard. These requirements are procedural as well as substantive and were added to sharpen and enhance public scrutiny and judicial review of Agency action. Yet despite this clear congressional intent, EPA failed to carry out its legal mandate. Although the final standard is stricter overall than the one it replaced, it does not represent an environmental victory. Following a series of improper postcomment period communications and pressure tactics designed to direct Agency attention toward energy issues and away from pollution problems, EPA chose to promulgate a standard requiring much less control than that mandated by section 111 and its legislative history. Such a regulatory precedent, if allowed to stand, would pose a major threat to future human health and environmental quality. Congress has made its statement on the issue. In this case it is not the legislator, but the Administrator, who stands accused.