



1978

Nuclear Power and Preemption: Opportunities for State Regulation

Robert S. Peck

Follow this and additional works at: <https://engagedscholarship.csuohio.edu/clevstrev>

 Part of the [Energy and Utilities Law Commons](#), and the [State and Local Government Law Commons](#)

How does access to this work benefit you? Let us know!

Recommended Citation

Note, Nuclear Power and Preemption: Opportunities for State Regulation, 27 Clev. St. L. Rev. 117 (1978)

This Note is brought to you for free and open access by the Law Journals at EngagedScholarship@CSU. It has been accepted for inclusion in Cleveland State Law Review by an authorized editor of EngagedScholarship@CSU. For more information, please contact library.es@csuohio.edu.

NUCLEAR POWER AND PREEMPTION: OPPORTUNITIES FOR STATE REGULATION

THE DANGERS POSED TO HUMAN BEINGS and their environment by the spread of nuclear power as an energy source have become the subject of a heated public debate. Faced with a rise in energy demand and a concurrent worldwide shortage of energy resources, the federal government has seen atomic power to be at least a part of the answer to America's energy needs.¹

The controversy hinges on how stringent the licensing and regulation procedures at these existing plants, as well as proposed nuclear facilities, should be. While pro-nuclear forces contend that existing federal oversight adequately protects the public from nuclear-related hazards, concerned citizens' groups have pressed their arguments for tighter regulation through lobbying, referenda, and protest demonstrations. They charge that nuclear plants are extremely dangerous, necessitating extraordinary safety precautions. More and more states have responded to this pressure by urging safety standards in excess of the current federal regulations on plants within their borders. Consequently, the question has arisen whether such state efforts at nuclear regulation can co-exist with comprehensive federal regulation in the face of the preemption doctrine.²

This Note proposes that federal preemption should not be deemed to bar state regulations which further federal goals by imposing more stringent demands upon the regulated subject matter. Additionally, however, valid state regulations must further a demonstrable public health and safety interest of the state, and must not be explicitly barred by a valid congressional declaration of exclusive federal authority. This view of preemption would permit a state to implement a policy reflecting the federal balance between strict safety regulation of nuclear power and encouragement of the continued development of atomic energy. Thus, stricter regulations would be within the permissible scope of state authority, while an effective ban of nuclear facilities would not. To understand the interplay between the federal and state roles in the scheme of regulation, it is necessary first to examine the state of the preemption doctrine.

I. THE PREEMPTION DOCTRINE

It has long been established, through the operation of the Supremacy Clause of the U.S. Constitution,³ that valid exercises of federal authority

¹ N.Y. Times, Apr. 16, 1978, at 34, col. 1. Currently, 68 commercial nuclear electric-generating plants operate in the United States, providing 12 percent of the country's electricity. This latter figure reflects Federal Power Commission statistics for the first six months of 1977, which was the first time that the volume of electricity generated by nuclear power exceeded that from hydroelectric sources. Coal (46.1%), oil (17.8%) and gas (13.2%) were the only sources of electricity in more frequent use. Atomic Industrial Forum, Press Info. No. 82, September 1977, at 1. The 1978 coal strike caused a 14 percent dependency on nuclear power for electrical energy. TIME, Mar. 27, 1978, at 57.

² See generally notes 3-41 *infra* and accompanying text for a discussion of the preemption doctrine. Court preemption decisions relevant to nuclear regulation are discussed at notes 128-48 *infra* and accompanying text.

³ U.S. CONST., art. VI, cl. 2 provides in pertinent part: "This Constitution, and the Laws of the

supersede incompatible state laws.⁴ Federal sovereignty permits national policy to be implemented without state-enacted obstacles, and the preemption doctrine was developed to aid the judiciary in the resolution of federal-state statutory conflicts. The doctrine has been explained by the Supreme Court as reflecting the principle that:

. . . where the federal government, in the exercise of its superior authority in this field, has enacted a complete scheme of regulation and has therein provided a standard . . . , states cannot, inconsistently with the purpose of Congress, conflict or interfere with, curtail or complement, the federal law, or enforce additional or auxiliary regulations.⁵

In other words, if the offending state statute acts "as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress," it will be deemed preempted.⁶ Applying this interpretation, the Court has invalidated state measures requiring the local registration of aliens,⁷ permitting the certification of labor unions not qualifying under federal law,⁸ and ascribing criminal conduct to Communist party membership.⁹ In all these cases, a dominant federal interest reflected by legislation governing the same subject matter was found to be adversely affected by the state action.

A finding of preemption is based on the court's judgment that two elements exist.¹⁰ First, the federal statute involved must be a valid exercise of constitutionally granted authority. Second, Congress must either have manifested an intent to have exclusive jurisdiction over the relevant subject matter, or the state legislation must be in actual conflict with the federal law.

The first element is obviously necessary, as no federal law can be valid unless Congress has the power to legislate in that area.¹¹ Absent congressional action in such an area, the state often retains authority to prescribe the law.¹² It is clear, however, that when Congress decides to occupy a field exclusively, the concept of federal supremacy does not offend

United States which shall be made in Pursuance thereof . . . shall be the Supreme Law of the Land. . . ."

⁴ *McCulloch v. Maryland*, 17 U.S. (4 Wheat.) 316 (1819).

⁵ *Hines v. Davidowitz*, 312 U.S. 52, 66-67 (1941).

⁶ *Id.* The Supreme Court cited the *Hines* characterization of preemption with approval in *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 479 (1974) and *Goldstein v. California*, 412 U.S. 546, 561 (1973).

⁷ *Hines v. Davidowitz*, 312 U.S. 52 (1941).

⁸ *Bethlehem Co. v. State Bd.*, 330 U.S. 767 (1947).

⁹ *Pennsylvania v. Nelson*, 350 U.S. 497 (1956).

¹⁰ Many commentators may dispute this simple declaration of but two elements. Time and again the decisions on preemption have hinged on their examination, though no decision has specifically singled out these precise elements. In *Perez v. Campbell*, 402 U.S. 637 (1971), the Court identified a two-step process to preemption determinations closely parallel to the elements suggested by this Note. The *Perez* factors to be considered were a construction of the statutes involved and a determination as to whether they actually conflicted.

¹¹ *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 229-30 (1947).

¹² *Willson v. Black Bird Creek Marsh Co.*, 27 U.S. (4 Pet.) 245 (1829). This principle assumes the subject matter of the state legislation is amenable to a concurrent exercise of power by the state and federal governments. Obviously, in an area of exclusive federal power, such as foreign relations, a state may not act under any circumstances.

the powers otherwise reserved to the states¹³ by the Tenth Amendment.¹⁴

Determining the intent of Congress with respect to preemption has caused the most difficulty. The courts have found preemption without inquiry into congressional intent only "when compliance with both federal and state regulations is a physical impossibility."¹⁵ Where there is not such a direct confrontation between federal and state regulations, the Supreme Court has declared that:

If Congress is authorized to act in a field, it should manifest its intention [to preempt] clearly. It will not be presumed that a federal statute was intended to supersede the exercise of the power of the state unless there is a clear manifestation of intention to do so. The exercise of federal supremacy is not lightly to be presumed.¹⁶

Congressional intent has been clearly expressed in two fashions: occupation of the entire field which may be subjected to regulation, and preemption only of a particular subject within a broader field. In the former case, Congress declares the federal interest in the pertinent field to be so great as to require national uniformity.¹⁷ The latter focus exists when Congress demonstrates a narrower federal interest than regulation of an entire field.¹⁸

The judicial requirement of a clearly expressed intent to preempt does not mean such intent may not be found by implication.¹⁹ A court may imply such intent where, after weighing the relative interests of the state and federal governments, it finds the federal interests to be conclusive and designed to promote a needed national uniformity.²⁰ Similarly, intent may be implied where the state regulation is an obstacle to the accomplishment of valid congressional objectives sought to be furthered by the federal regulation.²¹ The Supreme Court has explained that:

The scheme of federal regulation may be so pervasive as to make

¹³ See, e.g., *United States v. Darby*, 312 U.S. 100, 123-24 (1941), finding that the Tenth Amendment merely defines the relationship between the federal and state governments, and does not prevent exercise of powers delegated to the national government. *But, cf.* *National League of Cities v. Usery*, 426 U.S. 833 (1976) (limiting the exercise by Congress of its power to regulate commerce where this would "operate to directly displace the states' freedom to structure integral operations in areas of traditional governmental functions").

¹⁴ U.S. CONST. amend. X provides in pertinent part: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the states respectively. . . ."

¹⁵ *Florida Lime and Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963).

¹⁶ *Schwartz v. Texas*, 344 U.S. 199, 202-03 (1952).

¹⁷ See, e.g., *Pennsylvania v. Nelson*, 350 U.S. 497 (1956), invalidating a state sedition law on the basis of federal anticommunist legislation which demonstrated the dominant federal interest in matters of national security.

¹⁸ See, e.g., *Mauer v. Hamilton*, 309 U.S. 598 (1940), finding that the Motor Carrier Act of 1935 authorized the Interstate Commerce Commission to promulgate regulations regarding truck safety, but did not so occupy the field as to bar state regulation of vehicle sizes and weights.

¹⁹ See, e.g., *Napier v. Atlantic Coast Line R. Co.*, 272 U.S. 605 (1926), finding that state regulation of locomotive equipment used in interstate commerce was precluded by the federal Locomotive Boiler Inspection Act, which, due to its comprehensiveness, occupied the field.

²⁰ See, e.g., *Bethlehem Co. v. State Bd.*, 330 U.S. 767, 772 (1947), overturning a New York act permitting state certification of unions not so qualifying under the National Labor Relations Act.

²¹ *Hines v. Davidowitz*, 312 U.S. 52 (1941). See text accompanying note 6 *supra*.

reasonable the inference that Congress left no room for the States to supplement it Or an Act of Congress may touch a field in which the federal system will be assumed to preclude enforcement of state laws on the same subject Likewise, the object sought to be obtained by the federal law and the character of obligations imposed by it may reveal the same purpose²²

While the pervasiveness of the regulatory scheme has been held to imply preemption, in recent years the Supreme Court has not found federal legislation to be preemptive simply because of the great detail found in the federal statute. In *New York Department of Social Service v. Dublino*,²³ the Court declared: "The subjects of modern social and regulatory legislation often by their very nature require intricate and complex responses from the Congress, but without Congress necessarily intending its enactment as the exclusive means of meeting the problem."²⁴ *Dublino*, however, did not mark the death of the pervasiveness test for implied preemption. In *City of Burbank v. Lockheed Air Terminal*,²⁵ the Court found that the pervasiveness of the federal regulations on air travel preempted by implication a city ordinance placing a curfew on jet flights from the local airport.

The current status of the preemption doctrine demonstrates that adoption of the approach that preemption not be found where state regulations further federal goals by imposing more stringent requirements does not require a major reversal of current law. Instead, current law certainly appears to allow such a view. The view expressed in *Hines v. Davidowitz*²⁶ barring a complementary or additional regulation by the states²⁷ has only been found applicable to state efforts which are unqualifiedly preempted by congressional directive or are actual obstacles to federal policy, and is thus entirely consistent with the advocated approach.

It is in the area of implied preemption that this Note departs from popular doctrine. Without an express congressional declaration of preemption, both the Supreme Court and inferior tribunals are loathe to take the initiative to find preemption. *Bethlehem Co. v. State Board*²⁸ mandates consideration of the relative interests of the state and federal governments in the regulated subject matter. In this consideration the state's demonstrable health and safety interests should be heavily weighed. In *Mauer v. Hamilton*,²⁹ the Supreme Court upheld on safety grounds a Pennsylvania statute banning "over the cab" trucks from operating on state highways, despite the Interstate Commerce Commission's determination, pursuant to its rulemaking authori-

²² *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947).

²³ 413 U.S. 405 (1973) (Federal Work Incentive provisions of the Social Security Act did not preempt the state of New York from enacting its own work rules, which imposed additional requirements on recipients of federally-sponsored, though state-administered, financial assistance program).

²⁴ *Id.* at 415.

²⁵ 411 U.S. 624 (1973).

²⁶ 312 U.S. 52 (1941).

²⁷ See text accompanying notes 5-9 *supra*.

²⁸ 330 U.S. 767 (1947). See note 20 *supra* and accompanying text.

²⁹ 309 U.S. 598 (1940).

ty, that these vehicles were entirely safe. Suggesting the existence of a special status for health and safety in preemption decisions, the Court declared that:

As a matter of statutory construction Congressional intention to displace local laws in the exercise of its commerce power is not, in general, to be inferred unless clearly indicated by those considerations which are persuasive of the statutory purpose. This is especially the case when public safety and health are concerned.³⁰

The Court's language raises an important factor in cases involving the commerce power. Until Congress asserts federal authority in a field, the states are free to regulate.³¹ A logical extension of this concept would be that activities not specifically covered by the federal scheme of regulation could be regulated by the state.³² Thus, federal policy is not disturbed in the absence of a conflict, and states are permitted to implement laws extending copyright-like protection to recordings for unlimited periods of time,³³ and patent-like protection to trade secrets,³⁴ despite the existence of extensive federal laws affording lesser security.

While it is clear that there is no preemption where there is no conflict between the state and federal measures, it appears to be equally clear that no conflict exists where the state regulation duplicates the federal one and is merely more stringent. In *California v. Zook*,³⁵ a state law identical to federal requirements prohibiting motor carriers from operating on public highways without an Interstate Commerce Commission permit was upheld against a preemption attack, despite its heavier penalties for violations. Similarly, the Court has allowed the states to enact more comprehensive antidiscrimination laws than exist on the federal level because of their conformity with federal goals.³⁶

The heavier burden on those claiming preemption of state health and safety regulations suggested by *Mauer* operates to insure a forum for the state's legitimate interests in these areas. Traffic safety considerations were sufficient in 1949 to uphold a New York City ordinance prohibiting the use of street vehicles as advertising displays, which were distracting to motorists, against a claim that the regulation unduly burdened commerce.³⁷ Similarly, the interests of states and their instrumentalities in protecting health were

³⁰ *Id.* at 61 (emphasis added).

³¹ See, e.g., *Huron Cement Co. v. Detroit*, 362 U.S. 440 (1960), holding a city pollution ordinance affecting shipping not preempted by federal inspection requirements within the maritime authority. Since the decision in *Heart of Atlanta Motel, Inc. v. United States*, 379 U.S. 241 (1964), upholding the validity of Title II of the 1964 Civil Rights Act through the operation of the Commerce Clause, federal commerce authority has touched nearly all possible subject matters. As a result, schemes of concurrent state and federal regulation have become commonplace.

³² *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947).

³³ *Goldstein v. California*, 412 U.S. 546 (1973).

³⁴ *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

³⁵ 336 U.S. 725 (1949).

³⁶ *Colorado Anti-Discrimination Comm'n v. Continental Air Line*, 372 U.S. 714 (1963).

³⁷ *Railway Express Agency, Inc. v. New York*, 336 U.S. 106 (1949).

cited by the Court in upholding a city air pollution ordinance despite its effect on shipping within the federal government's maritime authority.³⁸

The framework provided by the current case law certainly permits the courts to implement this Note's proposed view of preemption, and to an extent appears to compel that result. However, there has been no real uniformity in the Supreme Court's preemption decisions.³⁹ Part of the reason for this is that Congress often fails to adequately consider the legal ramifications of its actions, and thus provides little guidance to the courts. More importantly, the Court's lack of consistency might be attributed to the need under current doctrinal approaches for a somewhat arbitrary judicial characterization of a regulation as a health, safety or other type measure.⁴⁰ When courts have such wide discretion, unevenness in approach is bound to occur.⁴¹

II. THE DANGERS OF NUCLEAR POWER

Nuclear energy is created by a process called fission,⁴² which occurs when uranium or synthetic plutonium atoms are split into lighter atoms, releasing huge quantities of heat. A nuclear power plant converts this heat to steam in order to drive electricity-producing turbines.⁴³ The harboring of a tremendous energy source, which has vast destructive force as weaponry and is an efficient source of electric power as well, requires extreme care.

The relatively recent realization that fossil fuel supplies are finite has propelled nuclear energy to the forefront as a part of the solution to a feared energy shortage. Nuclear power is attractive due both to greater efficiency than conventional power generation and the absence of pollutant emissions

³⁸ *Huron Cement Co. v. Detroit*, 362 U.S. 440 (1960).

³⁹ See Note, *Preemption as a Preferential Ground: A New Canon of Construction*, 12 *STAN. L. REV.* 208 (1959). Cooperative federalism has gained greater acceptance from the Supreme Court, particularly under the leadership of Chief Justice Warren Burger. For persuasive arguments regarding the trend toward permitting concurrent state regulation, see Comment, *Federal Preemption of State Laws Controlling Nuclear Power*, 64 *Geo. L.J.* 1323 (1976) and Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court*, 75 *COLUM. L. REV.* 623 (1975).

⁴⁰ See, e.g., *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132 (1963), where the Supreme Court upheld a California statute that prohibited importation of avocados into the state if they contained less than 8% oil, despite a valid federal regulation that gauged avocado maturity in another manner. While it was conceded that this was not a health measure, the Court declined to distinguish between health-related measures and those seeking to prevent consumer deception.

⁴¹ Certainly, this Note's thesis involves a great amount of judicial discretion as well. If restricted to valid health and safety measures, however, an element of predictability is added to the new confused preemption equation.

⁴² Another source of nuclear power is fusion. Fusion is the binding of light atoms to create large quantities of heat, as opposed to fission's reliance on the splitting up of heavy atoms to create that heat. Fusion should be a more efficient method of producing energy, resulting in almost no radiation waste. However, fusion is still in the experimental stages and should not become an energy source until the year 2000. *AMERICAN NUCLEAR SOCIETY POWER AND THE ENVIRONMENT: QUESTIONS AND ANSWERS* 47 (1973) [hereinafter cited as *NUCLEAR POWER*]. Fusion energy may be even further off than the end of the century due to budget cuts in the developmental program made by the Carter Administration. *Wall St. J.*, Feb. 17, 1977, at 3, col. 2.

⁴³ *ERDA, NUCLEAR ENERGY 1 (EDM-1016 R (9-76))* (1976) [hereinafter, *NUCLEAR ENERGY*].

from its plants.⁴⁴ The Council on Environmental Quality⁴⁵ has found that "the nuclear system causes little land disruption, air pollution and water pollution and leads to the fewest occupationally-related injuries and deaths."⁴⁶

Traditionally, the primary concern in nuclear regulation has been the danger that nuclear waste could be fashioned into atomic weaponry. In response to a year-long study of the problem, the U.S. Nuclear Regulatory Commission (NRC) in 1977 ordered security tightened immediately at 14 nuclear plants utilizing enriched uranium or plutonium capable of use in a bomb. The extra security greatly increases the costs of nuclear plant maintenance.⁴⁷ The agency also expressed concern over the potential for sabotage at nuclear facilities.⁴⁸ Although most commercial plants do not utilize fuel sufficiently enriched for conversion into weapons,⁴⁹ the city of Los Angeles has already faced one incident of extortion by a threat of nuclear destruction aimed at the local power plants. Concluding that plutonium presents substantial risks in its potential access to terrorists, President Carter, in April 1977, ordered a halt to development of the fast breeder variety of nuclear reactors⁵⁰ and to the practice of extracting plutonium from spent reactor fuel.⁵¹

In addition to the fears of making nuclear weapons available to terrorists, danger is posed by radiation. Leakage of atomic materials can cause the rapid spread of radiation, presenting enormous risks to life within the area of an atomic plant. Radiation can have two types of biological effects, somatic and genetic.⁵² Radiation has a somatic effect when it has a negative impact on health or lifespan. Its genetic effects produce mutations in offspring.⁵³ While the actual radiation discharged from an operating nuclear plant is minimal,⁵⁴ a real radiation danger exists from the disposal of radioactive wastes.

⁴⁴ Palfrey, *Energy and the Environment: The Special Case of Nuclear Power*, 74 COLUM. L. REV. 1375, 1377 (1974).

⁴⁵ See National Environmental Policy Act of 1969 §§ 202-209, 42 U.S.C. §§ 4342-4347 (1970 & Supp. V 1975).

⁴⁶ COUNCIL ON ENVIRONMENTAL QUALITY, ENERGY AND THE ENVIRONMENT — ELECTRIC POWER 18 (1973).

⁴⁷ Bernard Rusche, chief of reactor regulation at the NRC, has estimated the new security considerations have increased plant construction costs by \$2.5 million and added an additional yearly maintenance expense of up to \$2 million. Cleveland Press, Mar. 17, 1977, at D-1, col. 1.

⁴⁸ N.Y. Times, Feb. 20, 1977, at 1, col. 4.

⁴⁹ N.Y. Times, Feb. 21, 1977, at 24, col. 1.

⁵⁰ The fast breeder reactors are an experimental nuclear power generating source designed to produce more plutonium fuel than is used in the fission process. NUCLEAR ENERGY at 3. This has the advantage of creating a guaranteed fuel supply from what would otherwise be nuclear waste.

⁵¹ Cleveland Press, Apr. 7, 1977, at B-5, col. 3. In response to the Carter directive, the Energy Research and Development Administration has begun research on developing fuels not susceptible to conversion into bombs. Cleveland Press, Apr. 8, 1977, at A-7, col. 3. Despite the Carter Administration's policy decision to discontinue the Clinch River breeder reactor project, the House Science and Technology Committee earmarked \$172.5 million in April 1978 to keep the project alive. The earlier presidential veto of the bill establishing the project was effectively overridden by the congressional passage of a supplemental appropriation which continued the project's funding. N.Y. Times, Apr. 17, 1978, at A-22, col. 1.

⁵² NUCLEAR POWER at 14 (1973).

⁵³ *Id.*

⁵⁴ An operating nuclear plant as a matter of course generates between one and 10 picocuries of

Both nuclear fuels and wastes are transported by truck on public highways. Well-tested safety containers are utilized to prevent the leakage of radioactive materials. The containers have successfully thwarted disaster during several hundred transportation accidents involving radioactive materials, although improperly packaged materials have allowed some radioactive leakage.⁵⁵ With such a large number of traffic accidents, concern obviously runs high.

Low radiation level liquid wastes from power plants are diluted and then routinely dumped into oceans, rivers and lakes.⁵⁶ Although discharge levels are strictly regulated and monitored, the accumulation of radioactivity can be dangerous; this consideration caused the allowable discharge amount to be cut in 1971.⁵⁷ The problem of nuclear waste disposal has become a major issue within the overall nuclear power controversy. Because the problem is of such enormous concern, the Council on Environmental Quality has gone so far as to recommend a moratorium on power plant licensing until a technologically feasible system of waste disposal is developed.⁵⁸ Unless such a system is found, some nuclear plants, having only limited capacity to store spent fuel, may have to close down in the late 1980's.⁵⁹

Further danger is presented by the potential for accidents at nuclear plants, which could cause catastrophic consequences. Nuclear power currently enjoys an unparalleled safety record, incurring only one injury in an occupationally-related incident as of 1976. This safety record spans 175 commercial and 1300 naval reactor-years of operation.⁶⁰

Despite this record of safety, a number of incidents have caused alarm. A classified number of deaths due to radiation, estimated at seven, have occurred during the course of nuclear research.⁶¹ On December 13, 1977, two unexplained explosions at a Connecticut nuclear power plant injured one employee, who required decontamination treatment, and caused a "small" release of radioactive gases.⁶² Perhaps the worst nuclear plant disaster

radiation per liter. The picocurie represents one millionth of a curie, the traditional radioactivity measuring unit. By comparison, domestic tap water and milk generate 20 and 1,400 picocuries per liter, respectively. *Id.* at 11. Exposure to a nuclear power plant generates only one-fifth the dosage of radiation which exposure for the same length of time to a color television generates. *Id.* at 9.

⁵⁵ ERDA, *ATOMS ON THE MOVE* 38 (1975).

⁵⁶ *NUCLEAR POWER* at 11 (1973).

⁵⁷ *Id.*

⁵⁸ *N.Y. Times*, Oct. 2, 1977, at 16, col. 1.

⁵⁹ *N. Y. Times*, Apr. 16, 1978, at 34, col. 1. Temporary storage facilities in Washington and Kentucky have experienced leakage problems. *Id.* Current Energy Department plans call for permanent disposal of nuclear waste by burial in salt or hard-rock formations. Environmental groups have questioned the efficacy of a geologic burial procedure. To test the plan, the government proposes to build a demonstration facility in New Mexico with an expected 1983 completion date. A permanent full-size facility would not be completed until at least five years after the demonstrator's completion. *N.Y. Times*, March 16, 1978, at D-3, col. 1.

⁶⁰ *NUCLEAR ENERGY* at 3. A reactor-year consists of one nuclear plant in operation for one year. *N.Y. Times*, June 20, 1976, § 6 (Magazine), at 8.

⁶¹ *How Safe is Nuclear Power?*, *NEWSWEEK*, Apr. 12, 1976, at 72.

⁶² *N.Y. Times*, Dec. 14, 1977, at B-5, col. 1. Nearly 35 other employees were contaminated by contact with radioactive materials which landed on snow outside the plant as a result of the explosions. *N.Y. Times*, Dec. 15, 1977, at B-4, col. 1. Explosions have plagued a number of plants, and are usually the result of the detonation of gases which fail to filter through the exhaust

occurred at Alabama's Browns Ferry plant on March 22, 1975. A burning candle set off a major fire which caused failures in seven of twelve safety systems designed to prevent a core meltdown.⁶³ A core meltdown is caused by an overheating of the central core of the plant, causing a chemical reaction and a major release of radioactive particles into the atmosphere.⁶⁴ During the summer of 1973, the Atomic Energy Commission (AEC) forced ten plants to reduce their output because of the danger of overheating accidents.⁶⁵

The effects a major meltdown would have are the subject of great controversy among scientists. A nuclear plant cannot explode like a bomb because it is designed to contain radioactivity, rather than to enhance its spread.⁶⁶ A 1957 study conducted by the Brookhaven National Laboratory for the Atomic Energy Commission concluded that the worst possible nuclear accident at a power plant would result in as many as 3,400 deaths, extending distances of up to 15 miles, while injuries to people as far as 45 miles from the site would number 43,000. Property damage would reach seven billion dollars, and land contamination would be even more widespread.⁶⁷ A revised study in 1965 indicated a greater potential for damage due to the larger plants then being built.⁶⁸

According to the recent NRC position, the worst nuclear disaster would result in 3,300 casualties, although wind conditions and population densities could cause the figure to vary.⁶⁹ However, the Union of Concerned Scientists, a group opposed to the spread of nuclear power plants, contends that the figure for radiation deaths due to a nuclear disaster properly ranges between 23,000 and 36,000.⁷⁰ One AEC study estimated the potential disaster area from a reactor accident to be an area equal in size to the state of Pennsylvania.⁷¹

At the urging of and under a grant from the NRC, Dr. Norman Rasmussen of the Massachusetts Institute of Technology deduced the potential results of the worst possible plant accident. He stated that all people living in the immediate area of the plant, including all workers there, would die of intense radiation. Additional hundreds would die of radiation sickness. Dr. Rasmussen also concluded that cancer would plague more than 1,000 residents per year for the next 30 years due to contact with the radiation cloud. Hundreds of acres would also have to be quarantined for several decades.⁷²

system. Two such explosions occurred within a four month period at one Vermont plant. N.Y. Times, Mar. 24, 1978, at A-12, col. 6.

⁶³ *How Safe Is Nuclear Power?*, NEWSWEEK, Apr. 12, 1976, at 72.

⁶⁴ All nuclear plants are outfitted with emergency core cooling systems (ECCS), a series of overlapping safety measures to safeguard against the possibility of a meltdown. NUCLEAR POWER, *supra* note 42, at 36. It was the ECCS which prevented the meltdown at Browns Ferry despite the failure of seven of the twelve systems.

⁶⁵ Ford & Kendall, *What Price Nuclear Power?*, 10 TRIAL 10 (1974).

⁶⁶ AEC, *Reactor Safety Study: An Assessment of Accidental Risks in U.S. Commercial Nuclear Power Plants*, 16 ATOMIC ENERGY L.J. 177 (1974).

⁶⁷ Green, *Safety Determinations in Nuclear Power Licensing: A Critical View*, 43 NOTRE DAME LAW. 633, 633 (1968).

⁶⁸ *Id.* at 634.

⁶⁹ *How Safe Is Nuclear Power?*, NEWSWEEK, Apr. 12, 1976, at 73.

⁷⁰ *Id.*

⁷¹ Ford & Kendall, *What Price Nuclear Power?*, 10 TRIAL 10, 11 (1974).

⁷² *How Safe is Nuclear Power?*, NEWSWEEK, Apr. 12, 1976, at 74.

The Rasmussen study also purported to determine the probability of a nuclear accident. It concluded that the chances of a nuclear reactor accident capable of causing death, with 100 plants in operation, is one in five billion, while by comparison the chances of being fatally struck by lightning was one in two million.⁷³ According to Rasmussen, a meltdown might occur once every 1.75 centuries, and only one in ten meltdowns would have negative health effects.⁷⁴

The methodology of the Rasmussen report has been challenged, however, as inappropriate to the subject matter. Having utilized national laboratories and personnel associated with the AEC, the study has also been charged with lacking necessary independence from the government's pro-nuclear position.⁷⁵ According to Wolfgang K. H. Panofsky, director of the Stanford Linear Accelerator Center and chairman of a report review panel set up within the American Physical Society (APS), a full critique of Rasmussen's work is impossible due to the extraordinary length of the report, lack of manpower, and scarcity of sufficient funds for a private group to undertake such a project.⁷⁶ Rasmussen's study was prepared at a taxpayer expense of four million dollars over a three year period. Additional difficulties were posed, Panofsky said, by the report's failure to detail the origins of its data and the assumptions made.

Another member of the APS panel, Frank von Hippel of Princeton University, claimed the report was "deceptive" inasmuch as it only related to the probabilities of an accident causing immediate deaths. From the Rasmussen data, von Hippel calculated that an accident capable of causing ten immediate deaths would also result in 7,000 cancer deaths, 4,000 genetic defects, 60,000 thyroid cases, 3,000 square miles of land contamination, and enough water pollution to force a body of water the size of the Ohio River above the maximum permissible drinking standard for more than a year. He concluded that reactor accidents which carry such long-range effects are not statistically comparable to the chance of death by lightning or other means noted in the report for purposes of risk comparison.⁷⁷

A review conducted for the Environmental Protection Agency (EPA) found the study inadequate in several major areas. Like von Hippel, the EPA review criticized the lack of consideration given delayed health effects. The review also panned Rasmussen's failure to utilize the methodology endorsed by the National Academy of Science for determining radiation's biological effects, instead of using one more favorable to a smaller death risk. The EPA questioned the report's assumption that there would be a quick evacuation of

⁷³ *Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants*, WASH-1400 (NUREG-75/014), U.S. Nuclear Regulatory Commission (October 1975), reprinted in ERDA, NUCLEAR ENERGY 5 (EDM-1016 R(9-76)) (1976).

⁷⁴ AEC, *Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants*, 16 ATOM. ENERGY L.J. 177, 192 (1974). This preliminary printing of the Rasmussen report had set the risk of fatality from a nuclear reactor accident at one in three hundred million, a considerably lower figure than the final revised report's one in five billion. All figures were limited in application to the current generation of water-cooled reactors.

⁷⁵ *Rasmussen Issues Revised Odds on a Nuclear Catastrophe*, 190 SCIENCE 640, 640 (1975).

⁷⁶ *Reactor Safety: Congress Hears Critics of Rasmussen Report*, 192 SCIENCE 1312, 1312 (1976).

⁷⁷ *Id.*

the populace in case of an accident. According to the EPA, inadequate consideration was given to the probability of radiation releases, human errors, aging equipment, densely populated locales, and the existence of a faulty reactor. It concluded that the report understated the risk, although the degree of underestimation was not determinable.⁷⁸

The Rasmussen study remains the most exhaustive examination of the probabilities of a nuclear accident. However, because of its controversial nature, others have proffered their own estimates. On the basis of undisclosed data, John O'Leary of the Federal Energy Agency for the Carter Administration has estimated that once the country has 1,000 nuclear plants, a major meltdown could be expected to occur every ten years.⁷⁹ It is this great potential for destruction that prompts the concession made by even the most avid nuclear advocates that there must be sufficient regulation and mandatory safety procedures. What "sufficient" means, however, remains in dispute.

A possibility which none of the studies considered is an intentional nuclear disaster, as might occur through sabotage. Since 1969, more than 170 unsuccessful sabotage attempts have been directed against nuclear plants in the United States.⁸⁰ Clearly, failure to consider this factor is another reason to doubt the accuracy of the studies, and to fear the proliferation of nuclear reactors.

The question of what is sufficient nuclear safety cannot be resolved by the legislature or by courts on the basis of scientific data. For every study by competent experts, another drawing opposite conclusions exists. Pro-nuclear forces boast two Nobel Prize winners, Hans Bethe and Glenn Seaborg, in support of their position. Fellow Nobel Prize awardees James Watson and Linus Pauling even the score by their opposition to nuclear power.⁸¹ Furthermore, the nuclear debate is not just an American phenomenon.⁸² It must, therefore, remain with the legislators to strike the balance which will be pursued in American nuclear energy policy.

A. *The Federal Response*

Atomic energy legislation has largely reflected the nation's concerns over possible nuclear dangers. Fear centering upon nuclear energy's potential as a weapon led Congress to assert federal ownership over nuclear materials and facilities through the Atomic Energy Act of 1946.⁸³ Atomic energy was an entirely new field, and Congress foresaw no possible state interest because it viewed such energy as weaponry, rather than as a source of electrical power.

⁷⁸ *Id.* at 1313.

⁷⁹ Wall St. J., Jan. 21, 1977, at 26, col. 1.

⁸⁰ *How Safe Is Nuclear Power?*, NEWSWEEK, Apr. 12, 1976, at 71. See notes 48-51 *supra* and accompanying text.

⁸¹ *How Safe Is Nuclear Power?*, NEWSWEEK, Apr. 12, 1976, at 71.

⁸² In Japan, the nuclear power issue has doubtlessly been colored by the memory of the World War II bombings of Hiroshima and Nagasaki, which still evoke bitter feelings. Anti-nuclear protests have spread through most of Western Europe. Environmental lawsuits in West Germany are on the verge of forcing a three-to-five year moratorium on new plant construction. N.Y. Times, Aug. 7, 1977, at 18-E, col. 6. Nuclear power was the number one issue in the 1978 French legislative elections. *Id.* at col. 1.

⁸³ Ch. 724, 60 Stat. 755 (1946).

In 1954, Congress opened nuclear energy to commercial development and ownership.⁸⁴ The purpose of the 1954 Atomic Energy Act was to encourage progress and development in the peaceful use of atomic energy within the bounds of public health and safety.⁸⁵ Federal jurisdiction over the subject of nuclear power legislation was founded upon the federal commerce power.⁸⁶ The 1954 Act prescribed licensing procedures for the possession, transfer, or use of nuclear materials⁸⁷ and for nuclear facilities.⁸⁸ The Act also vested in the AEC⁸⁹ extensive rulemaking powers.⁹⁰ Federal, state and local authority over regulation of the generation, sale or transmission of electric power was left unabridged by the Act.⁹¹

Nevertheless, the Act demonstrated no federal recognition of a possible state role in the regulation of nuclear power, outside of its traditional regulatory interest with respect to all electrical power. That oversight was corrected in 1959, by an amendment⁹² to the Act that authorized the AEC to make agreements with state governors permitting the states to assume regulatory authority over nuclear byproducts and source materials⁹³ in quantities insufficient to comprise critical mass.⁹⁴ The amendment also permitted state participation in the licensing procedures by requiring that concerned states be given notice of and a right to intervene in proceedings for consideration of license applications.⁹⁵

Federal domination of nuclear power regulation was set out most clearly in 1965. The Ninth Circuit of the United States Court of Appeals had previously found that the reservation in the 1954 Act of state authority over the generation, sale and transmission of electric power precluded an attempt by the AEC to acquire transmission line easements by condemnation.⁹⁶ Congress responded to the court's decision by amending the relevant statutory section to limit state regulatory authority to the subjects of rates and services for electric power produced at a nuclear facility.⁹⁷

⁸⁴ Atomic Energy Act of 1954, ch. 1073, 68 Stat. 919 (current version at 42 U.S.C. §§ 2011-2296 (1970)).

⁸⁵ *Id.* § 3(d) (current version at 42 U.S.C. §§ 2012(a), 2013 (1970)).

⁸⁶ 42 U.S.C. 2012(c) (1970).

⁸⁷ Ch. 1073, 62, 68 Stat. 919 (current version at 42 U.S.C. § 2092 (1970)).

⁸⁸ *Id.* § 101 (current version at 42 U.S.C. § 2131 (1970)).

⁸⁹ The 1946 Act, Ch. 724, 60 Stat. 755, created the AEC in order to place nuclear energy under civilian authority. *Id.* § 2(a).

⁹⁰ *Id.* §§ 161(b), (i), (p), (q) (current version at 42 U.S.C. §§ 2201 (b), (i), (o), (p) (1970 & Supp. V 1975)).

⁹¹ *Id.* § 271 (current version at 42 U.S.C. § 2018 (1970)).

⁹² Act of September 23, 1959, Pub. L. No. 86-373, 73 Stat. 688 (1959) (current version at 42 U.S.C. § 2021 (1970)).

⁹³ Special nuclear materials are enriched radioactive materials, capable in sufficient quantity (critical mass) to be used in making a bomb. 42 U.S.C. § 2014 (aa) (1970).

⁹⁴ 42 U.S.C. § 2021 (b); 10 C.F.R. 150.1-150.30 (1977). As of April 12, 1974, 25 states had entered into such agreements with the AEC. 5 CCH ATOM. EN. L. REP. ¶ 16,508 (1974).

⁹⁵ 42 U.S.C. § 2021 (1) (1970).

⁹⁶ *Maun v. United States*, 347 F.2d 970 (9th Cir. 1965).

⁹⁷ Act of August 24, 1965, Pub. L. No. 89-135, 79 Stat. 551 (1965) (current version at 42 U.S.C. 2018 (1970)).

In 1974, Congress sought to resolve an internal conflict between the developmental and regulatory functions of the AEC with the passage of the Energy Reorganization Act.⁹⁸ The purpose of the Act was to assure the development of all energy sources, while advancing "the goals of environmental quality and assuring public health and safety."⁹⁹ Recognizing that it was impossible for one agency to both encourage and restrict the growth of nuclear power,¹⁰⁰ Congress abolished the AEC.¹⁰¹ The Energy Research and Development Administration (ERDA) was established and designed to develop fully all possible energy sources.¹⁰² To focus on the safety aspects of commercial atomic power plants, Congress created the NRC.¹⁰³

An application to the NRC for a construction permit must include all technical specifications for the proposed plant¹⁰⁴ and a preliminary safety analysis report which details the design, operation, and maintenance plans for the facility.¹⁰⁵ All major features for the protection of the public's health and safety must be specifically identified in the report.¹⁰⁶ If the safety considerations satisfy the NRC, a construction permit is issued.¹⁰⁷ Upon substantial completion of construction in accordance with the plans submitted to the NRC and a small test operation,¹⁰⁸ a license is issued.¹⁰⁹ However, many people remain unsatisfied with the standards used and the manner in which the federal regulatory function has been discharged.

B. *The Citizen Response*

Environmentalists have been most vocal in opposition to the continued development of nuclear power in a manner which they view as irresponsible. Russell Train, administrator of the Environmental Protection Agency during the Nixon and Ford Administrations, has joined the anti-nuclear forces and called for "the phasing out and eventual elimination of all nuclear power."¹¹⁰

⁹⁸ Pub. L. No. 93-438, 88 Stat. 1223 (codified at 42 U.S.C. §§ 5801-91 (Supp. V 1975)).

⁹⁹ 42 U.S.C. § 5801 (a) (Supp. V 1975).

¹⁰⁰ *Id.* § 5801 (c) (Supp. V 1975).

¹⁰¹ *Id.* § 5814 (Supp. V 1975).

¹⁰² *Id.* § 5811 (Supp. V 1975).

¹⁰³ *Id.* § 5841(a)(1) (Supp. V 1975). Despite the singular functional jurisdiction of regulation assigned to the NRC, the commission still suffers from the pro-nuclear stance that characterized the AEC. Many of its technical staff and policymakers are former AEC employees who have carried their biases over from the AEC. In addition, many of them received their training within, and continue to have ties with, the private nuclear industry over whom they supposedly perform a watchdog function. The predicament has hampered enforcement of NRC regulations where inspectors have overlooked some improper construction practices and used estimates on data crucial to safety determinations. Interview with James Lieberman, attorney in the Enforcement Division of the NRC, in Bethesda, Maryland (Nov. 22, 1977). The Justice Department has charged the NRC with concealing, along with the licensee, the existence of a geologic fault under a Virginia power plant. *N.Y. Times*, Oct. 2, 1977, at 22, col. 1.

¹⁰⁴ 10 C.F.R. §§ 50.36, 50.36 (a) (1977).

¹⁰⁵ 10 C.F.R. § 50.34 (1977).

¹⁰⁶ *Id.*

¹⁰⁷ 10 C.F.R. § 50.50 (1977).

¹⁰⁸ 10 C.F.R. § 50.51 (1977).

¹⁰⁹ 10 C.F.R. § 50.57 (1977).

¹¹⁰ *Campaigning for an Embattled Cause*, *TIME*, Mar. 21, 1977, at 73.

While few nuclear critics have expressed views that extreme, many have willingly supported measures that would place a moratorium on continued nuclear construction until such time as all safety questions can be satisfactorily resolved.¹¹¹ The public's uncertainty over the safety of nuclear power is reflected in a July 1976 Gallup Poll, which registered only 34 percent of the public as confident in current nuclear safety regulations, despite an overall 71 percent approval of the use of nuclear power.¹¹² In 1976, voters in seven states succeeded in placing on the ballot propositions designed to restrain nuclear development. All of the referenda suffered defeat.¹¹³ The agitation which the ballot issues reflected is a growing obstacle to continued nuclear development.

Nuclear critics have begun to focus their efforts to attain tighter regulation elsewhere, after continued failures in Congress. Congressional lobbying efforts had to be directed at the Joint Committee on Atomic Energy, a group that has frequently been criticized as decidedly pro-nuclear.¹¹⁴ The committee, formed pursuant to the 1946 Atomic Energy Act, had exclusive jurisdiction over matters involving nuclear power and was authorized to receive and recommend proposed legislation to the whole Congress, an authorization unique among joint committees.¹¹⁵ One of the first acts of the 95th Congress was to strip the joint committee of its legislative jurisdiction.¹¹⁶ It is still too early to tell whether Congress, as a result of this action, will be more vulnerable to lobbying by nuclear safety advocates. Without a sympathetic avenue by which to bring their arguments to the national legislature, the nuclear critics turned to the courts for help. They won a major victory in *Calvert Cliff's Coordinating Committee, Inc. v. AEC*,¹¹⁷ which forced the AEC to change its rules to comply with the mandate of the 1969 National Environmental Policy Act (NEPA).¹¹⁸ NEPA requires the preparation of an environmental impact statement by federal administrators before taking "[f]ederal actions significantly affecting the quality of the human environment."¹¹⁹ Although NEPA responsibilities are non-delegable,¹²⁰ the AEC and its successor, the NRC, have evinced a reluctance

¹¹¹ See notes 175-79 *infra* and accompanying text.

¹¹² N.Y. Times, Nov. 9, 1976, at 18, col. 3.

¹¹³ *Campaigning for an Embattled Cause*, TIME, Mar. 21, 1977, at 73. The states were Arizona, California, Colorado, Montana, Ohio, Oregon and Washington. Most of the measures were designed to place a moratorium on future plant construction until the state legislature was satisfied with the plants' safety precautions.

¹¹⁴ The committee has been accused of arbitrarily and unfairly cutting off the testimony of nuclear critics in its hearings on the rare occasions when such testimony has been allowed. Major safety issues have allegedly been glossed over in the committee's indiscretions, and procedural abuses were compiled by the citizens' lobbying group, Common Cause. See COMMON CAUSE, STACKING THE DECK (December 1976).

¹¹⁵ STAFF OF JOINT COMM. ON ATOM. ENERGY, 94TH CONG., 1ST SESS., CURRENT MEMBERSHIP at 3, 4 (Comm. Print 1976).

¹¹⁶ N.Y. Times, Jan. 5, 1977, at A13, col. 1. One of the major lobbyists behind this move was Common Cause, which had published a study critical of the committee. *Id.* See note 114 *supra*.

¹¹⁷ 449 F.2d 1109 (D.C. Cir. 1971).

¹¹⁸ 42 U.S.C. §§ 4321-4361 (1970).

¹¹⁹ 42 U.S.C. § 4332 (c) (1970).

¹²⁰ *Greene County Planning Bd. v. F.P.C.*, 445 F.2d 412 (2d Cir.) *cert. denied*, 409 U.S. 849 (1972).

to carry out this environmental mandate. Suit had to be brought to force the AEC to examine the environmental impact of its liquid metal fast breeder reactor program.¹²¹ Other actions brought to cause a more complete review of environmental effects have suffered dismissal on procedural grounds.¹²²

The effect of NEPA on the overall nuclear regulatory scheme has been to extend the authority of the AEC, and now the NRC, into the consideration of environmental factors. In a pre-NEPA case, *New Hampshire v. AEC*,¹²³ the state sought review of an AEC order permitting construction of a nuclear plant just across the border in Vermont, after the Commission had refused to consider evidence of possible thermal pollution. The court of appeals upheld the Commission's contention that thermal pollution, being unrelated to radiological effects, was outside the AEC's jurisdiction. NEPA has changed this by placing all pollutant effects within the Commission's jurisdiction and, more importantly, by requiring consideration of the effects of thermal and other types of pollution on the environment.

In *Train v. Colorado Public Interest Research Group, Inc.*,¹²⁴ the Supreme Court denied environmentalists a victory by reversing a lower court order that would have forced the EPA to regulate radioactive discharges from nuclear power plants into navigable waters. The Court concluded that radioactive discharge regulation was within the power of the NRC, rather than the EPA. The suit was brought under the Water Pollution Control Act Amendments of 1972¹²⁵ because the plaintiffs perceived that no one was regulating the discharges. If indeed a gap does exist due to the NRC's refusal to regulate the discharges and EPA's judicially-imposed bar, an opportunity and need exists for state regulation to fill the void.

In *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*,¹²⁶ the Supreme Court recently chastised the District of Columbia Circuit for imposing its own notions as to proper procedural requirements upon the NRC, and effectively shut off the bid of an environmental group to gain NRC consideration, under NEPA, of a plan for energy conservation as an alternative to approval of a nuclear plant license.

The nuclear critics' limited success on the federal level, in the courts and in Congress, has caused them to shift their entreaties for stricter health and safety regulation to the states. Their efforts have spanned the full spectrum of citizen action. Protest demonstrations, such as the highly publicized sit-ins at the Seabrook, New Hampshire nuclear plant construction site,¹²⁷ have

¹²¹ *Scientists' Inst. for Pub. Information, Inc. v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973). The court found the ongoing development of liquid metal fast breeder to carry with it controversial environmental effects sufficient to remove the project from mere research and place it within the area governed by NEPA requirements.

¹²² See, e.g., *Nader v. NRC*, 513 F.2d 1045 (D.C. Cir. 1975); *Ecology Action v. AEC*, 492 F.2d 998 (2d Cir. 1974) (not final order); *Citizens for a Safe Environment v. AEC* 489 F.2d 1018 (3d Cir. 1974) (not final order).

¹²³ 406 F.2d 170 (1st Cir.) *cert. denied*, 395 U.S. 962 (1969).

¹²⁴ 426 U.S. 1 (1976), *rev'g*, 507 F. 2d 743 (10th Cir. 1974).

¹²⁵ Pub. L. No. 92-500, 86 Stat. 816 (amending numerous sections of the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1376 (Supp. V 1975)).

¹²⁶ 98 S. Ct. 1197 (1978).

¹²⁷ See, *The Seige of Seabrook*, TIME, May 16, 1977, at 59. On June 30, 1978, the NRC ordered

been headline-grabbing events. Able to raise local manpower for lobbying efforts, the critics have received a warmer welcome in the state legislatures. Where they have succeeded in prompting state action, the nuclear industry has been forced into court, relying mainly on the defense of federal preemption.

III. PREEMPTION AND NUCLEAR POWER

The leading case dealing with the issues raised by preemption and state regulation of nuclear power is *Northern States Power Co. v. Minnesota*.¹²⁸ The plaintiff, a power company operating a nuclear power facility in Minnesota, sought a court order enjoining enforcement of state measures regulating releases of radioactive wastes from nuclear power plants into the environment. Such state regulation had the effect of requiring the plant to take additional, and thus more costly, anti-pollution measures. All facts were stipulated and the sole dispute was whether exclusive jurisdiction over atomic regulation rested with the federal government. The plaintiff had sought a Minnesota Pollution Control Agency permit for the disposal of waste coming from its nuclear plant. The permit was granted on the condition that certain specified radioactive limitations and monitoring procedures, more restrictive than those imposed by the federal government, be followed. The district court held the state to be preempted from imposing the conditions.¹²⁹ In its appeal, Minnesota was supported by amicus briefs filed by the states of Michigan, Wisconsin, Illinois, Maryland and Vermont.¹³⁰

The court of appeals affirmed the district court holding, finding support for an intent to preempt in the Atomic Energy Act provisions which prohibited the AEC from discontinuing authority over such items as radioactive effluents.¹³¹ The court concluded that the clauses permitting agreements between the AEC and the states¹³² and allowing state regulation of areas other than radiation hazards¹³³ implied an intent to preempt, since they would have been unnecessary in the absence of assumed preemption. The discharges were also found to be a part of the overall operation of the plant, which was extensively governed by federal regulations.¹³⁴ Thus, pervasiveness was held to be a factor leading to implied preemption.

The *Northern States* dissent focused on the fact that the more stringent

an indefinite suspension of construction at Seabrook while it considers alternative sites as required under NEPA. Nearly \$400 million dollars had been spent on the project by the Public Service Company of New Hampshire up to the date of the order, which is meant to preserve the opportunity for a real choice among alternative sites. See BNA Environment Reporter, Current Developments, Vol. 9, No. 10, at 405, 406 (July 7, 1978).

¹²⁸ 447 F.2d 1143 (8th Cir. 1971), *aff'd per curiam*, 405 U.S. 1035 (1972).

¹²⁹ 320 F. Supp. 172 (D. Minn. 1971).

¹³⁰ 447 F.2d at 1145 n. 1.

¹³¹ *Id.* at 1149; 42 U.S.C. § 2021(c) (1970).

¹³² 447 F.2d at 1149; 42 U.S.C. § 2021(b) (1970). See notes 92-94 *supra* and accompanying text.

¹³³ 447 F.2d at 1149; 42 U.S.C. § 2021(k) (1970).

¹³⁴ 447 F.2d at 1153.

standards imposed by the state were aimed at protecting public health and safety.¹³⁵ It was error, therefore, for the trial court to find absolute preemption and to refuse to consider the reasonableness of the state regulation.¹³⁶ The dissent reflected the approach advocated here, since Congress had not expressly indicated its intent to preempt the field. The *Northern States* majority, on the other hand, relied heavily on the clause in the 1954 Atomic Energy Act which reserved state authority only over areas other than protection against radiation hazards.¹³⁷ It reasoned, therefore, that radiation emissions were implicitly removed from concurrent state and federal regulation.

Such a backhanded approach to preemption cannot reasonably be considered to reflect the required clear congressional declaration of an intent to preempt. Because there was no clearly expressed preemptive intent, the court was then obligated to look beyond absolute preemption and investigate whether a conflict between the measures existed. Since Minnesota was asserting a public health and safety interest which did not interfere with federal policy, the disposal permit's conditions should have been sustained. The conditions did not impose an unreasonable burden, nor did they require the utility company to comprise federal requirements at the cost of complying with state rules.

Certainly, nothing would stop a safety-conscious utility from constructing and designing its operation to comport with the highest safety standards modern technology could provide, despite considerably lesser federal requirements. Similarly, if a state desired to provide the impetus for this safety consciousness, they should be allowed to do so as long as they do not operate to frustrate federal policy. The Minnesota requirements imposed on the Northern States Power Company were of the sort which complemented federal policy, and should have been permitted to coexist therewith.

Several cases prior to *Northern States* had dealt with preemption in the energy field. In 1946, the Supreme Court found that the Federal Power Act gave exclusive jurisdiction over all energy matters to the Federal Power Commission, reserving state authority only as to stream beds and banks.¹³⁸ The Court thereby mandated a dual system of regulation, though limited in scope. In 1960, a California state court found federal preemption to exist in the nuclear field, holding that a city could not altogether ban nuclear power plants licensed by the AEC through the operation of zoning ordinances.¹³⁹

The California Supreme Court faced the question of federal preemption in *Northern California Association v. Public Utility Commission*.¹⁴⁰ In determining a state commission's jurisdiction to decide a challenge to that commission's certification of construction of a proposed nuclear plant, the California court unanimously held there was no preemption, except as to the

¹³⁵ 447 F.2d at 1155 (dissenting opinion).

¹³⁶ 447 F.2d at 1158 (dissenting opinion).

¹³⁷ 42 U.S.C. § 2021(k) (1970).

¹³⁸ *First Iowa Hydro-Elec. Coop. v. F.P.C.*, 328 U.S. 152 (1946).

¹³⁹ *Boswell v. City of Long Beach*, 1 CCH ATOM. EN. L. REP. 4045 (L.A. Super. Ct. 1960).

¹⁴⁰ 61 Cal. 2d 126, 390 P.3d 200, 37 Cal. Rptr. 432 (1964).

regulation of radiation hazards. The justices found that the 1954 Atomic Energy Act explicitly recognized a state interest in nuclear matters.¹⁴¹

In *Department of Environmental Protection v. Jersey Central Power & Light*,¹⁴² the New Jersey Supreme Court relied upon *Northern States* to hold state penalties for water pollution inapplicable to a nuclear facility.¹⁴³ The court found that state regulation in this instance was improper, since the AEC, in the absence of agreement with the state, had exclusive jurisdiction over radioactive hazards.¹⁴⁴ The court held immaterial the fact that the state regulations "may not have been directed at the particular activity involved."¹⁴⁵ The New Jersey court, however, failed to consider the mandate of the Water Pollution Prevention and Control Act¹⁴⁶ that

[a]ny applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate. . . . No license or permit shall be granted if the certification has been denied by the State. . . .¹⁴⁷

Just as NEPA forced the NRC to consider environmental ramifications in its decisions, the Water Pollution Prevention and Control Act should properly constrain nuclear activity so as to comport with environmental objectives. The Act certainly opens an avenue for the assertion of state regulation prior to NRC licensing. *Northern States*, however, has firmly established the principle of federal preemption of all phases of health and safety in the nuclear field. Unless the Supreme Court decides otherwise on the question, the nuclear preemption concept is not vulnerable to critical argument. Hope for such Supreme Court action lies in the trend of decisions of which *New York Department of Social Services v. Dublino*¹⁴⁸ is characteristic.¹⁴⁹ Whether this trend will effect a retreat from the *Northern States* approach remains to be seen.

¹⁴¹ *Id.* at 129, 390 P.2d at 204, 37 Cal. Rptr. at 436; 42 U.S.C. § 2021(a) (1970). The state certification procedure involved location of the plant and was in addition to requirements imposed by the AEC.

¹⁴² 69 N.J. 102, 351 A.2d 337 (1976), *rev'g*, 133 N.J. Super. 375, 336 A.2d 750 (Super. Ct. App. Div. 1975).

¹⁴³ Additionally, the New Jersey high court reversed the appellate and trial courts' findings of a violation of the state's water pollution law by holding the nuclear plant's discharge to be in conformity with the law.

¹⁴⁴ 69 N.J. at 111-12, 351 A.2d at 342-43.

¹⁴⁵ *Id.* at 112, 351 A.2d at 343.

¹⁴⁶ 33 U.S.C. §§ 1251-1376 (Supp. V 1975).

¹⁴⁷ 33 U.S.C. §1341 (Supp. V 1975).

¹⁴⁸ 413 U.S. 405 (1973). See text accompanying notes 23-24 *supra*.

¹⁴⁹ For a discussion of the trend, see Comment, *Federal Preemption of State Laws Controlling Nuclear Power*, 64 GEO. L.J. 1323 (1976) and Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court*, 75 COLUM. L. REV. 623 (1975).

IV. OPPORTUNITIES FOR STATE REGULATION OF NUCLEAR POWER

Two considerations may influence the desire of the various states to regulate nuclear power. One is whether environmental concerns can remain of significant policy importance by withstanding the pressures of energy-hungry Americans. The point need not come, however, when the states must choose between an abundant energy supply and a clean environment. The two are not entirely incompatible. The other consideration is that additional state regulations may deter the industry from locating in the state. The costs of construction, inspections, technical difficulties, security, and satisfaction of the regulations imposed by government have nearly wiped out the savings from nuclear-generated energy which were expected over conventional production methods.¹⁵⁰ The industry has nearly come to a standstill as a result of these expenses. General Electric, the nation's largest equipment supplier for nuclear facilities, has begun a reassessment of its role in the nuclear industry as a result of financial difficulties and the deferral of most of the nuclear projects planned for the remainder of this decade and the early 1980's.¹⁵¹ Plant cancellations due to immense costs have caused an indefinite postponement of overall goals for nuclear-supplied electricity. President Ford hoped to reach a level of 200 plants in the United States by 1985, but today's estimates fall far short of that figure, despite the Carter Administration's promises to expedite licensing.¹⁵²

Despite these considerations, the states have clearly indicated a desire to participate in nuclear power regulation, at least for the moment. Many states have attempted to assert some control over the existence of nuclear power plants within their boundaries¹⁵³ through the operation of environmental protection measures or legislation specifically dealing with atomic power. Citizen group interest in using the state forum to regulate nuclear energy has been growing after rebuffs on the federal level.¹⁵⁴ The state efforts at regulation have manifested themselves in six basic approaches which will be separately treated.

A. *Direct and Incidental Regulation*

In 1970, Illinois began enforcing a new law that attempted expressly to regulate radiation from nuclear power plants. The Illinois statute asserted

¹⁵⁰ A report issued by the House Government Operations Subcommittee on the Environment, Energy and Natural Resources has concluded that the as yet undetermined costs of nuclear waste disposal may make nuclear power more costly than coal or solar power generation. N.Y. Times, Apr. 11, 1978, at 23, col. 1.

¹⁵¹ General Electric, 1974 Annual Report 10. The NRC reports that out of a total of 170 nuclear plants once planned for the nation, 145 have suffered deferrals due to industry financial and safety problems. N.Y. Times, Aug. 14, 1977, at 27, col. 1.

¹⁵² N.Y. Times, Nov. 9, 1976, at 18C, col. 3.

¹⁵³ *State of New Hampshire v. AEC*, 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969), involved an attempt by the state of New Hampshire to enlist AEC consideration of its interests in a nuclear power plant actually located in another state, Vermont, although just beyond the plaintiff state's border. See note 129 *supra* and accompanying text.

¹⁵⁴ See notes 110-127 *supra* and accompanying text.

the state legislature's recognition of the health and safety dangers posed by radiation.¹⁵⁵ It required the filing of an "environmental feasibility report" to the state Pollution Control Board, "concurrently with the filing of the preliminary safety analysis to be filed with the United States Atomic Energy Commission."¹⁵⁶ In addition, the statute authorized the Board to establish independent radiation standards "to protect the citizens of Illinois."¹⁵⁷ Despite the obvious health and safety aims of the measure, an Illinois court struck down the statute on preemption grounds, relying on *Northern States*.¹⁵⁸ Thus, despite a clearly declared and demonstrable interest in health and safety, a state apparently cannot directly regulate nuclear power radiation hazards.

Regardless of the Illinois court's conclusions, every state in the nation has continued to exercise some degree of control over nuclear radiation. Perhaps the most compelling reasons that the states have acted are the experiences they have had which demonstrate deficiencies in plant safety. Frequent reports of radiation leakages from nuclear plants, though allegedly not of a dangerous nature, have contributed to this heightened concern.¹⁵⁹ Other experiences have indicated that current regulations do not necessarily provide for every contingency. For example, California's Diablo Canyon plant was nearly completed, at a cost of one billion dollars, when an active underwater fault was discovered near the coastal plant site. The plant was built within the prescribed safety standards to withstand earthquakes up to 6.75 on the Richter scale, which was sufficient to endure any earth tremor produced by nearby faults, prior to the discovery of a new one. However, scientists believed the newly-discovered fault to be responsible for a 1926 earthquake estimated at 7.25 on the Richter scale.¹⁶⁰

State concern was further demonstrated when the New Jersey Department of Environmental Protection hired former federal nuclear expert P.R. Davis to conduct a safety study of the state's oldest atomic power plant.¹⁶¹ Davis concluded that the plant, located at Oyster Creek, had an accident probability of causing the release of harmful or deadly amounts of radiation over the next three decades, of one in 100.¹⁶² Davis' figures differ from those of the Rasmussen study¹⁶³ because of the Oyster Creek plant uses a safety system that is partly manual, and is thus less reliable than modern automatic systems.¹⁶⁴ The state of Connecticut has commissioned a similar study of its plants.¹⁶⁵

¹⁵⁵ ILL. ANN. STAT. ch. 111-1/2, § 1025a (Smith-Hurd 1970).

¹⁵⁶ *Id.* See notes 104-09 *supra* and accompanying text, concerning now-NRC's licensing requirements.

¹⁵⁷ ILL. ANN. STAT. ch. 111-1/2, § 1025a (Smith-Hurd 1970).

¹⁵⁸ As in *Northern States*, the court gave little weight to the assertion of health and safety interests by the state; see also *Commonwealth Edison Co. v. Pollution Control Bd.*, 5 Ill. App. 3d 800, 284 N.E.2d 342 (1972).

¹⁵⁹ See, e.g., N.Y. Times, Jan. 5, 1977, at B23, col. 5.

¹⁶⁰ *Energy: A Nuclear Horror*, TIME, Feb. 9, 1976, at 74.

¹⁶¹ The plant went into operation in 1969.

¹⁶² N.Y. Times, Jan. 2, 1977, § 11, at 1, col. 1.

¹⁶³ See text accompanying notes 72-74 *supra*.

¹⁶⁴ N.Y. Times, Jan. 2, 1977, § 11, at 1, col. 1.

¹⁶⁵ N.Y. Times, Feb. 16, 1977, at 14, col. 1.

Naturally, state interest will peak when a state is called upon to supply funds for nuclear safety. Such is the situation in New York, where an estimated \$600 million will be required to decommission and decontaminate a private nuclear fuel reprocessing plant.¹⁶⁶ Although the state is seeking federal assistance, the situation drives home the point that there is a legitimate state concern in nuclear regulation. The decommissioning of the New Jersey Oyster Creek plant would cost about \$100 million, even though it was built for only \$65 million.¹⁶⁷

State concern is most naturally manifested in efforts at direct regulation. New York's consideration of a proposed Nuclear Responsibility Act is another example of such an attempt. The measure would allow nuclear plant construction in the state only after the builder fully tests the emergency cooling system, accepts full liability for potential damages due to a nuclear accident,¹⁶⁸ plans a safe means of waste storage, guarantees a lifetime fuel supply for the plant, and devises a plan for local evacuation in case of an emergency.¹⁶⁹ Regulation of the cooling system, waste storage and emergency evacuation are clearly aimed at radiological hazards, so that *Northern States*, if unmodified, would preempt these measures as infringing on federal jurisdiction over all matters relating to radiation.

Despite the current preemption doctrine, however, state legislatures have found numerous methods to indirectly deal with nuclear radiation problems through incidental regulation, or the use of valid regulatory powers to effect nuclear radiation safety practices. As an example, recall that the 1954 Atomic Energy Act¹⁷⁰ preserved state authority over the regulation of utility rates. Using this authority, Missouri voters in November, 1976, passed an initiative prohibiting utilities from financing new power facilities by passing costs to consumers prior to actual energy production at the new plant.¹⁷¹ With nuclear construction and maintenance costs already extremely high, the Missouri measure further inhibits capital investment in nuclear power so as to effectively slow, if not halt completely, future nuclear development in that state. It appears, however, that such an incidental regulation of nuclear power would operate to frustrate federal policy, and therefore be preempted.

Certainly, the effect of the rate regulation initiative goes far beyond the state efforts contemplated and rejected in *Northern States* and *Jersey Central*.

¹⁶⁶ Wicker, *Paying the Nuclear Piper — II*, N.Y. Times, Sept. 30, 1977, at A27, col. 5.

¹⁶⁷ *Id.*

¹⁶⁸ Damages were limited to \$500,000 per nuclear incident by the Price-Anderson Act, Pub. L. No. 85-256, § 4, 71 Stat. 576, as amended by 42 U.S.C. § 2210(c) (1970). On March 31, 1977, the Act was ruled unconstitutional on due process and equal protection grounds. *Carolina Environmental Study Group v. U.S. Atomic Energy Commission*, 431 F. Supp. 203 (W.D. N.C. 1977), *prob. juris. noted*, 98 S. Ct. 426 (1977). On June 26, 1978, however, the Supreme Court reversed, per Chief Justice Burger, finding that due to the presumption of constitutionality and the Act's clear and valid congressional purpose to remove economic restraints on development of the private nuclear power industry, the Act could not be unconstitutional unless arbitrary and irrational. The Court concluded that the liability limitation was reasonably related to the congressional purpose, and the extremely remote possibilities of an accident exceeding the limitation, among other reasons, satisfied due process and equal protection requirements. 48 U.S.L.W. 4845, (1978).

¹⁶⁹ Haley, *Atomic Watch in the Empire State*, 222 NATION 678 (June 5, 1976).

¹⁷⁰ 42 U.S.C. § 2018 (1970).

¹⁷¹ *Campaigning for an Embattled Cause*, TIME, Mar. 21, 1977, at 73.

Despite several congressional mandates giving the states primary authority in the prevention of pollution,¹⁷² *Jersey Central* produced the proposition that such authority must give way to federal interests in the nuclear field. Other grounds for preemption are that the Missouri rate regulation would effectively block a federal policy which encourages atomic development. Thus, the regulation if challenged in court, would probably be invalidated notwithstanding state authority to set utility rates.

Iowa has passed a law requiring a certificate of public convenience, use and necessity from the state commerce commission for all major power facilities to be built in the state.¹⁷³ While ostensibly a protection to the consumer against the burden of subsidizing a new but unnecessary power facility, the Act can be a tool used to prevent costly nuclear plant construction through a finding of its economic detriment to consumers. At least one commentator has concluded that the Act is not preempted since the federal government has no mechanism to examine a plant's economic feasibility, thereby leaving such authority to the states.¹⁷⁴ However, it is easy to see how such an act could be applied to frustrate federal policy in much the same way as the Missouri initiative. Indeed, the law gives Iowa the potential to impose an effective moratorium on nuclear plant development.

B. Nuclear Moratorium Legislation

In 1976, voters in seven states¹⁷⁵ defeated ballot propositions designed to restrict nuclear development in their respective jurisdictions. Had the issues passed, they would have been treated by the courts as regulations contravening the preemption doctrine. Separate treatment from other express regulations is warranted here because these were ballot propositions, and courts are generally reluctant to overturn an exercise of democracy.

The California initiative, first to go to the voters, was the prototype for the other proposals. The California referendum set forth certain safety and liability standards, more stringent than those set by the federal government, which all state plants would have to meet.¹⁷⁶ The new standards would have been imposed on both currently operating nuclear facilities and future sites as well, and plants incapable of compliance would have been required to gradually reduce power levels, so that within 11 years all violators would be closed.

Reasoning which may foreclose the validity of the California initiative is exemplified in *City of Tacoma v. Taxpayers*.¹⁷⁷ There the Washington Supreme Court upheld the city's right to build two dams in excess of 25 feet in height on a local river pursuant to a license granted by the Federal Power

¹⁷² See, e.g., 33 U.S.C. § 1251(b), (Supp. V 1975); see note 195 *infra*.

¹⁷³ Act of May 20, 1976, ch. 1206, §§ 1-16, 1976 Iowa Acts 453 (codified at IOWA CODE §§ 476A.1-.14).

¹⁷⁴ See Note, *State Regulation of Nuclear Power Plant Construction: The Iowa Model*, 63 IOWA L. REV. 124 (1977).

¹⁷⁵ The states were Arizona, California, Colorado, Montana, Ohio, Oregon and Washington.

¹⁷⁶ NUCLEAR POWER PLANTS INITIATIVE § 67503 (Initiative rejected June 8, 1976). If passed the measure would have been codified at CAL. GOV'T CODE §§ 67500-67508.

¹⁷⁷ 60 Wash. 2d 66, 371 P.2d 938 (1962).

Commission. State law and a state initiative passed two years earlier prohibited the construction of dams over 25 feet in height. The court found that the federal agency's valid authority to issue the license preempted the prohibitive state measures to the extent of the license grant. By attempting to prohibit nuclear facilities within the state, the California moratorium legislation likewise would have interfered with federal policy and prohibited a federally-licensed activity.

Undaunted by such legal invalidity, opponents of nuclear plant proliferation have continued to press for all-out bans on nuclear power plants. Early in 1977, residents in 35 Vermont towns, in annual governmental meetings, voted to prohibit nuclear plant construction and the transportation and storage of atomic materials within each town's borders.¹⁷⁸ While the prohibition sought by the townspeople is clearly preempted, the existence of grass roots opposition to nuclear power was successfully demonstrated by their actions.

As political opposition and continued state efforts to ban nuclear power mount, it may become difficult for the federal government to continue to assert the current preemption doctrine without a popular revolt. Already the NRC, when participating in state hearings on nuclear matters in which federal authority would allow claims of preemption, has opted to compromise and cooperate with the states rather than "stonewall" them. In Oregon, representatives of the NRC, appearing before a state legislative committee, urged the rejection of a measure banning nuclear facilities until a national radioactive waste disposal plan could be implemented, noting that the 1985 target date for such a plan now seems very difficult to achieve.¹⁷⁹ The fact that preemption was not mentioned in the NRC testimony is perhaps indicative of political pressure on the NRC.

C. *Gubernatorial Agreements*

The 1954 Atomic Energy Act authorizes the NRC to make agreements

¹⁷⁸ N.Y. Times, Mar. 3, 1977, at 24, col. 5.

¹⁷⁹ N.Y. Times, Jan. 16, 1977, at 44, col. 3. Wisconsin recently joined the states that now attempt to limit nuclear plant planning and construction, when its Public Service Commission issued a moratorium order on August 17, 1978. Until problems concerning fuel availability and price, waste disposal and reprocessing, and decommissioning costs are resolved, the order prohibits further spending on nuclear power plant development and also bans state utilities from making further contributions to the controversial Clinch River breeder reactor project in Tennessee. See BNA Environment Reporter, Current Developments, Vol. 9, No. 17 at 707, 708 (Aug. 25, 1978). The order was justified on economic rather than environmental grounds, but its validity is doubtful, especially in light of a recent appeals court affirmation that permanent waste disposal problems do not prevent nuclear plant licensing. *Natural Resources Defense Council v. NRC No. 77-4157* (2d Cir. 1978). See also BNA Environment Reporter, Current Developments, Vol. 9, No. 13 at 529 (July 28, 1978).

Similar moratoriums, however, are not without congressional support. On May 2, 1978, the House Government Operations issued a report entitled "Nuclear Power Costs," which asked that Congress and the President consider imposing a moratorium until radioactive wastes problems are solved. The report also recommended that the Department of Energy develop fee schedules to ensure reimbursement to the federal government of its funding contributions, and that the NRC require nuclear waste disposal costs to be fully amortized by nuclear plant construction and license applicants in order to mitigate the effects which higher waste disposal costs will have on the already financially-troubled private nuclear power industry. See BNA Environment Reporter, Current Developments, Vol. 9, No. 1 at 6, 7 (May 5, 1978).

with the state governors under which the states may take over health and safety regulatory authority for most nuclear materials.¹⁸⁰ As of April 12, 1974, 25 states had entered into these agreements.¹⁸¹ The agreements are based upon the state governors' certification of the programs' adequacy and the NRC's finding of compatibility between the state program and commission's objectives.¹⁸² Any agreement may be abrogated by the NRC upon a finding that the state's regulations provide inadequate health and safety protection to the public.¹⁸³ Through the agreements, states are invested with limited authority to regulate radiation risks, but cannot develop standards more stringent than provided by the NRC. Under such an agreement, California, for example, has broad inspection and enforcement powers over radiation using the federal standards.¹⁸⁴ To implement these standards the state is empowered to seek injunctions,¹⁸⁵ impound ionizing radiation sources,¹⁸⁶ and prescribe fines and criminal penalties¹⁸⁷ to deal with violators.

However, this may not be sufficient authority to satisfy state officials. Several weeks before the vote on California's ill-fated nuclear moratorium initiative, the state legislature passed three laws restricting nuclear power. One required the state energy commission to certify that a federally approved and tested technology exists for the disposal of spent fuel, and that plans are being implemented for the construction of such a disposal facility in California, before a new nuclear plant site could be approved.¹⁸⁸ Another required the same state commission to certify a similar capability for the permanent disposal of highly-radioactive wastes.¹⁸⁹ A third law placed a moratorium on nuclear construction until one year after the submission to the state legislature of an energy commission study on the practicality of building only underground nuclear facilities.¹⁹⁰ Though unchallenged, the laws clearly interfere with federal radiation authority and would be deemed preempted under current doctrine.

A number of states in addition to California have used the unresolved waste disposal problem as a basis for ending new plant construction.¹⁹¹ Several states, through gubernatorial agreements, have successfully expanded their authority along these lines. New York City has gained

¹⁸⁰ 42 U.S.C. § 2021(b) (1970).

¹⁸¹ 5 CCH ATOM. EN. L. REP. ¶ 16,508.

¹⁸² *Id.* ¶ 16,504.

¹⁸³ *Id.*

¹⁸⁴ CAL. HEALTH & SAFETY CODE § 25876, *ratified by* § 25875 (West 1967).

¹⁸⁵ *Id.* § 25850.

¹⁸⁶ *Id.* § 25860.

¹⁸⁷ *Id.* § 25865.

¹⁸⁸ *Nuclear Initiative*, 192 SCIENCE 1317 (1976).

¹⁸⁹ *Id.* A plant now under construction in Barnswell, South Carolina is reported to be the first with potential capabilities such as the California laws require.

¹⁹⁰ *Id.* On April 25, 1978, California's Attorney General issued a formal opinion that these laws are preempted under the Supremacy Clause in that they seek to impose state regulatory authority over reprocessing and waste disposal, both of which are within the NRC's apparently exclusive jurisdiction over nuclear radiation issues. See BNA ENVIRONMENT REPORTER, Current Developments, Vol. 9, No. 1 at 12, 13 (May 5, 1978).

¹⁹¹ See Wicker, *Paying the Nuclear Piper — III*, N.Y. Times, Oct. 2, 1977, at E17, col. 1.

Department of Transportation acquiescence in a health code ban on nuclear waste shipments through the city.¹⁹² Other cities throughout the country, such as New Haven, Connecticut, which is the designated alternate route with New York foreclosed, are considering imposing similar bans.¹⁹³

Cautious in its approach to an NRC agreement, the state of New York insisted on the inclusion of a provision specifying that the state was not conceding the issue of federal preemption, and mandating negotiations to determine the questions of overlapping authority involved in its gubernatorial agreement.¹⁹⁴ Thus, NRC agreements allowing state participation in the enforcement of federal standards generally fall short of the sort of authority states would like to wield. The very fact that numerous other efforts to attain such authority have been made establishes this insufficiency of permissible gubernatorial agreements.

D. Pollution Control Legislation

The states have been invested by Congress with the primary authority in regulation of pollution.¹⁹⁵ Yet *Northern States* and *Jersey Central* have limited the states' authority as to environmental matters when the asserted state interest in pollution affects a nuclear power plant. When this overlap between state pollution and federal nuclear authority occurs, the state measure must yield to superior federal prerogatives. Still, the states appear unwilling to restrict their pollution authority in such a manner. Preemption should not be allowed to block the operation of state-imposed pollution standards promulgated under sovereign federal authority and policy equal in importance to that embodied in the Atomic Energy Act.

The political or popular pressure resulting¹⁹⁶ may yet cause a relaxation of restraints on state pollution control laws affecting atomic power. In *Allway Taxi, Inc. v. City of New York*,¹⁹⁷ the court held that the Clean Air Act,¹⁹⁸ which prohibits states or their subdivisions, with the sole exception of California, from setting their own standards for exhaust emissions from new automobiles, did not preempt the city's imposition of exhaust controls on city-licensed taxicabs. After finding that the ordinance was not strictly in conflict with the federal statute, since it was not directed at new cars generally, the court observed that Congress' intent was to prevent burdens on interstate commerce resulting from differing state standards for newly-manufactured cars. The city's exercise of its police power aided Congress' purpose to provide clean air, and therefore the preemptive effect of the federal statute was narrowly construed.

¹⁹² N.Y. Times, Apr. 5, 1978, at A27, col. 5.

¹⁹³ *Id.*

¹⁹⁴ 5 CCH ATOM. EN. L. REP. ¶ 16,504.

¹⁹⁵ 33 U.S.C.A. § 1251(b) (West Supp. 1978), declaring that it is congressional policy to preserve "the primary responsibilities and rights of States to prevent, reduce and eliminate pollution."

¹⁹⁶ See text accompanying note 179 *supra*.

¹⁹⁷ 340 F. Supp. 1120 (S.D.N.Y.) *aff'd per curiam*, 468 F.2d 624 (2d Cir. 1972).

¹⁹⁸ 42 U.S.C.A. § 7543 (West Supp. 1978) (formerly 42 U.S.C. § 1857f-6a (1970)).

While the case is distinguishable from the nuclear regulation cases because only cities license taxicabs, the distinction may not be determinative of the case's precedential value. With the exception of California due to a special provision of the Clean Air Act affecting only that state,¹⁹⁹ no state, despite ample state authority to license vehicles for operation on the public highways, has the authority to propagate air emission standards for new automobiles stricter than those provided by the federal government. Although a taxicab is a special use vehicle, that fact should not logically import this authority upon a licensing agency, absent a special relationship between the special use and the pollution problem. Yet the *Allway Taxi* court permitted exactly that sort of an exception to federal authority. Perhaps the underlying reason was the court's recognition of the public interest issue in the health and safety category.

Under this Note's thesis, any pollution regulation which comports with federal policy taken as a whole and which is not explicitly barred would remain valid. Environmental concerns have received congressional blessings in the form of NEPA and many other antipollution measures, enforcement of which has fallen upon the states in an exercise of cooperative federalism. Emphasis on this strong federal environmental policy, however, would overrule *Northern States* as it stands today, and this view has not yet received judicial acceptance in the nuclear field. Perhaps the political pressure caused by the flurry of invalidations of new state measures under the current strict preemption doctrine will force the courts to adopt a more moderate position.

E. State Plant Siting Authority

Although the Commerce Clause gives the federal government authority to regulate nuclear plant siting, Congress has yet to exercise exclusive siting authority.²⁰⁰ Meanwhile, every state has exercised siting authority based upon its zoning powers. While it is clear from the discussion of moratorium legislation²⁰¹ that a state measure completely banning the construction of nuclear facilities within its jurisdiction would be invalidated, the siting power has been another means by which the states have attempted to regulate nuclear radiation hazards.

In nearly all states, siting authority is vested in either the public utilities commission or a special power siting commission. Of the latter, the Ohio Power Siting Commission (PSC) is typical. The Commission is comprised of

¹⁹⁹ 42 U.S.C.A. § 7543(b)(West Supp. 1978) (formerly 42 U.S.C. § 1857f-6a (1970)).

California's considerable congressional delegation was able to convince their colleagues of that state's special public health and safety interest so as to permit the state to enforce a more stringent air quality standard on new vehicles sold there. The provision was written generally, but California was the only state prepared to take advantage of the exception written into the act. See H.R. REP. NO. 728, 90TH CONG., 1ST SESS., reprinted in [1967] U.S. CODE CONG. & AD. NEWS 1938, 1956-1958.

²⁰⁰ Proposals to take over this authority have been introduced in Congress. See *Proposed Nuclear Powerplant Siting and Licensing Legislation: Hearings Before the Joint Committee on Atomic Energy*, 94th Cong., 1st Sess. (1975); BNA ENVIRONMENT REPORTER, Current Developments, Vol. 9, No. 6 at 196, 197 (June 9, 1978).

²⁰¹ See text accompanying notes 184-90 *supra*.

the chairman of the Public Utilities Commission, the directors of environmental protection, health, and development, and an engineer who is a member of the general public.²⁰² The construction of a nuclear facility, or of any major utility plant, is prohibited until authorized by a commission certificate.²⁰³ An applicant for a PSC certificate must file:

- (1) A description of the location and of the major utility facility to be built thereon;
- (2) A summary of any studies which have been made by or for the applicant of the environmental impact of the facility;
- (3) A statement explaining the need for the facility;
- (4) A statement of the reasons why the proposed location is best suited for the facility. . . .²⁰⁴

The PSC is authorized to establish criteria for the consideration of environmental factors at proposed and alternate sites,²⁰⁵ and is directed not to issue a certificate unless the facility will serve the public need with minimal adverse environmental impact, considering available technology and alternative means of power generation.²⁰⁶

Although the Ohio PSC recognizes that "the NRC is clearly pre-emptive [*sic*] in respect to such issues as radiation control, safety, security and common defense," it claims the right to "attach whatever conditions may be warranted with respect to design, construction procedures, operations or maintenance factors as long as these are not in conflict with NRC . . . requirements."²⁰⁷ The Ohio PSC, formed in 1972, has yet to make a certification decision on a nuclear plant.²⁰⁸

The import of the Ohio PSC viewpoint is that although the Commission operates within constraints set at the federal level, it has authority to complement the federal requirements, even in the absence of a gubernatorial agreement, so long as those requirements are not superseded. The result is state inquiry and inspection into matters *Northern States* reserved solely to federal jurisdiction, thereby expanding the state role in nuclear power. It is significant that the limitation of absence of conflict with the federal rules will be judged solely by the PSC unless appealed.

Every state commission dealing with siting certificates has made safety a factor in its inquiries.²⁰⁹ Thus far most have endeavored to strictly enforce NRC-developed standards, imposing more stringent requirements only in unique situations. At least two state siting agencies, those of New York and Florida, have determined that they are precluded from considering evidence

²⁰² OHIO REV. CODE ANN. § 4906.02(A) (Page 1972).

²⁰³ *Id.* § 4906.04.

²⁰⁴ *Id.* § 4906.06 (A) (1)-(4).

²⁰⁵ *Id.* § 4906.03 (E).

²⁰⁶ *Id.* § 4906.10 (A) (1)-(3).

²⁰⁷ Letter from William B. McGorum, Jr., Secretary of the Ohio Power Siting Commission, to Robert S. Peck (Apr. 4, 1977).

²⁰⁸ *Id.*

²⁰⁹ See, e.g., CCH ATOM. EN. L. REP. ¶¶ 16,631 (Wisconsin, 16,569 (New Jersey), 17,895 (1) (General).

of radiological environmental impacts due to federal preemption,²¹⁰ but other states persist in such inquiries and see room for expansion of their authority.

F. *The Vermont Approach*

The last means of control over nuclear power by the states might be dubbed the "Vermont approach" because of that state's leadership in the field. In April, 1975, Vermont passed a law requiring the approval of its state legislature before construction certification could be made by its Public Service Board.²¹¹ The law admonishes the legislature to use, as a guideline in its vote, the promotion of the general welfare. Before passing the measure, the state legislature defeated an amendment to the law which would have required the legislature to consider only non-radiological factors in its certification deliberations.²¹² By that rejection, the Vermont legislature ignored the *Northern States* mandate by placing health and safety factors, which largely reflect radiation dangers, within the scope of its inquiry. The measure would no doubt be deemed preempted under *Northern States* were it to be confronted in court; however, no plans for a new nuclear facility in that state exist, so no one has standing to challenge the law's validity.

More significantly, the state of Vermont has used its general authority to manipulate nuclear power. To gain approval of a bond issue, the Yankee Nuclear Power Company "voluntarily" agreed to submit to regulation by the Vermont Public Service, Water Resources, and Health boards, including rules relating to radioactive emissions, and to waive the defense of federal preemption.²¹³ By means of this written agreement, Vermont has obtained the degree of control it desires without the threat of invalidation on the grounds of preemption. There can be no doubt that federal preemption cannot interfere with the terms of this agreement. The federal regulations set only a minimum standard of conduct for nuclear facilities. Any nuclear power company may, without violating the federal requirements, exceed those standards on its own initiative. The Yankee Nuclear Power Company has entered into this agreement voluntarily, and has thereby gained certain economic benefits, established a good working relationship with the state and fostered a favorable business atmosphere. In short, the state took advantage of its ability to aid Yankee to gain otherwise unavailable regulatory authority. The result is a model which other states may wish to use in their continuing search for health and safety jurisdiction in the nuclear field.

Several states have adopted approaches similar to that followed in Vermont. In 1975, the state of Oregon created the Department of Energy²¹⁴ and the Energy Facility and Siting Council,²¹⁵ with siting and safety authority over the construction and operation of all types of power facilities in the state.

²¹⁰ See Note, *Nuclear Power Plant Siting: Additional Reductions in State Authority*², 28 U. FLA. L. REV. 439 (1976).

²¹¹ V.T. STAT. ANN. tit. 30. § 248 (c) (Supp. 1975).

²¹² Murphy & LaPierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Presumption*, 76 COLUM. L. REV. 392, 432 n. 220 (1976).

²¹³ *Id.* at 419-420.

²¹⁴ OR. REV. STAT. §§ 469.030(1) (1977).

²¹⁵ *Id.* §§ 469.450-520 (1977).

These state agencies are empowered to promulgate safety and radiation emission standards more stringent than those required by the NRC,²¹⁶ and power companies applying for site certification must agree to submit to all state agency regulations, including the certificate's own health and safety rules.²¹⁷ Similar requirements exist in Minnesota²¹⁸ and Colorado.²¹⁹

These state laws are similar to the Vermont Approach inasmuch as they use an area of recognized state authority to gain leverage over an area where federal authority is preemptive. However, the Oregon law is far more susceptible to charges of coercion. The Yankee Nuclear Power Company entered into the agreement to abide by the stringent state standards voluntarily, to gain economic benefits, but the Oregon measure leaves a power company no choice but to submit to state regulation if it wishes to build at all. Thus, the measure more closely approaches the directness of regulation found in nuclear moratorium legislation or laws prescribing more stringent state standards, and would be preempted by federal authority in the nuclear field under current doctrine.

V. CONCLUSION

Nuclear energy is an enormous source of power accompanied by potential for enormous disaster. The scientific community is in the throes of a debate on the likelihood of a nuclear accident and its probable effects, but the inability of scientific data to provide a precise answer to these crucial questions has allowed the federal government to adopt a policy towards nuclear energy which encourages development while attempting to minimize risks. The federal efforts at risk reduction have not satisfied the more safety-conscious elements of society, who have begun to gain influence with state governments, and have urged adoption of health and safety standards more stringent than those established at the federal level.

In *Northern States*, federal nuclear preemption was firmly established. This Note has advocated a means of analysis different from that used by the *Northern States* court, but having support in case law defining the preemption doctrine. Federal preemption should not bar state regulations which further federal goals by imposing more stringent demands upon the regulated industry. Such a view of preemption would enable the states to exercise a valid interest in the protection of the public from potential nuclear hazards. Other safeguards exist against the arbitrary use of state authority. To remain valid, the state regulation must further a demonstrable health or safety interest of the state, and cannot be explicitly barred by a valid congressional declaration of exclusive federal authority. Until nuclear energy is convincingly shown to be safe, caution is the best approach.

Despite *Northern States*, every state in the nation has attempted to regulate nuclear power to some degree. Several state efforts have suffered the rebuff of invalidation on preemption grounds, and others undoubtedly

²¹⁶ See *id.* §§ 469.500-.510.

²¹⁷ *Id.* § 469.440.

²¹⁸ MINN. STAT. ANN. § 144.12 (15) (West 1970).

²¹⁹ COLO. REV. STAT. § 25-11-103 (1973 & Supp. 1976).

will, when and if they are challenged in court. Nevertheless, new and more far reaching state legislation prescribing health and safety standards continues to be passed.

Currently there exist a number of modes through which the states can assert a certain amount of nuclear regulatory authority. Using the federal mandate of the Water Pollution Prevention and Control Act,²²⁰ the states can prevent federal licensing of nuclear power plants until satisfied with the facility's water pollution controls. Another means of exerting a state role in the nuclear field is through gubernatorial agreements, into which 25 states have entered with the NRC. However, the authority delegated to the states in the agreements is limited to enforcement of federal safety requirements. A third method is use of the state plant siting authority, whereby many states have found a valid means to inquire into a proposed facility's health and safety impact. In some states, submission to state health and safety regulations has become a condition precedent to siting approval, although this is of questionable validity in light of the federal preemption doctrine. Finally, there is the successful "Vermont Approach" of giving a nuclear power company favorable consideration in one area, such as a bond issue, in consideration for the company's voluntary submission to state standards more stringent than those imposed by the NRC.

It is clear that the states do not intend to end their attempts to control the nuclear genie. They will continue to use these and other means until a final resolution of the extent of state authority is reached. If it appears that state measures will impede federal energy policy, Congress could act to deny all state authority by an explicit declaration in new legislation, which could include a federal takeover of siting authority. However, it is more likely that, as public pressures increase, Congress will not make such a move. There will either be complete inaction or effort to appease the states through legislation allowing some greater degree of shared authority between the states and the federal government.²²¹ The courts as well are not immune to public sentiment as reflected in continued state efforts to gain a foothold in nuclear health and safety regulation. The pressure may encourage some retreat from the absolutist approach to preemption declared by *Northern States*, which in turn would necessitate some change in preemption analysis. The system of analysis advocated in this Note provides a framework for such a judicial retreat, thereby allowing the states more directly and validly to assert their own health and safety interests in nuclear power regulation.

ROBERT S. PECK

²²⁰ See text accompanying notes 146-47 *supra*.

²²¹ Representative Morris K. Udall (D-Ariz.) recently announced plans to introduce a bill in Congress that would give a state the power to veto the licensing of new nuclear facilities to be located within its borders. N.Y. Times, Aug. 14, 1977, at 27, col. 1.