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Federal Nuclear Policy and the 1987 Maine Nuclear Referendum: Viable Initiative or Legal Cul-de-Sac?

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FEDERAL NUCLEAR POLICY AND THE 1987 MAINE NUCLEAR REFERENDUM: VIABLE INITIATIVE OR LEGAL CUL-DE-SAC?

I. INTRODUCTION

On November 3, 1987, Maine voters once again rejected a proposal which would have forced closure of the Maine Yankee nuclear power plant, the state's only nuclear utility. The vote was the most recent in a series of attempts to close the plant,[1] utilizing the vehicle of popular referendum.[2] This latest initiative was in large part a consequence of intense public outcry against the possible location of a permanent nuclear waste repository in the state. It is therefore uniquely and personally linked to current passions concerning the future of nuclear electrical generation in the nation. The previous referenda to close the plant were rejected by substantial margins, and the margin of decision this time around was once again lop-

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1. Previous referenda to close the plant were on September 23, 1980 (the question reading, "Shall an act to prohibit the generation of electric power by means of nuclear fission become law?"), and November 2, 1982 (the question reading, "Shall an act to end the use of nuclear power for producing electricity in five years become law?"). Memorandum to House Democrats by Dan A. Gwadosky, Assistant Majority Leader of the Maine House of Representatives (September 29, 1987) (on file with the *Maine Law Review*).

2. In Maine, popular referendum questions come to the electorate via provisions in the state constitution: first, signatures must be gathered according to a constitutional formula, then the proposed "bill, resolve or resolution" is filed with the Secretary of State and presented to either chamber of the Legislature within mandated periods at the beginning of either the first or second regular sessions of the Legislature. The measure is then handled as follows:

> 2. *Referral to electors unless enacted by the Legislature without change.* . . . The measure thus proposed, unless enacted without change by the Legislature at the session at which it is presented, shall be submitted to the electors together with any amended form, substitute, or recommendation of the Legislature, and in such manner that the people can choose between the competing measures or reject both. When there are competing bills and neither receives a majority of the votes given for or against both, the one receiving the most votes shall at the next statewide election to be held not less than 60 days after the first vote thereon be submitted by itself if it receives more than one third of the votes given for and against both. If the measure initiated is enacted by the Legislature without change, it shall not go to a referendum vote unless in pursuance of a demand made in accordance with the preceding section. The Legislature may order a special election on any measure that is subject to a vote of the people.

ME. CONST. art. IV, pt. 3, § 18. The bill, if approved by the voters, becomes a statute. The proposed statutory text for the most recent referendum is contained in L.D. 20 (113th Legis. 1987). For the text of the bill, see *infra* text accompanying note 216. *See also* Comment, *Coping with Confusion: A Unitary Procedure for Judicial Review of the Referendum Process*, 41 MAINE L. REV. 113 (1989).

sided.[3] The vote was decisive, but three such referenda demonstrate the determination of antinuclear activists in Maine. It is entirely possible that the issue might come up again.

The purpose of this Comment is threefold. First, this Comment will briefly examine the history of nuclear regulation in the United States. This history is clouded by confusion and uncertainty concerning the boundaries between federal and state control of nuclear industry. This unique but tortured saga continues with no final resolution in view. Any assessment of America's nuclear future must be firmly grounded in a basic understanding of the various forces that have shaped the nuclear past.

Second, this Comment will utilize prophetic hindsight to analyze the 1987 Maine Nuclear Referendum. The purpose of this analysis is to determine whether the initiative would have survived federal preemption if passed. This Comment concludes that the 1987 referendum would have had little hope of surviving a preemption challenge. Though it rests upon informed speculation, such analysis will give future referendum proponents pause before they begin their labors.

Finally, this Comment proposes a model statute for future referendum approval. Though it is probable that *any* legislation enacted to close an operating nuclear utility would have little chance of survival, there *are* ways to better the odds. This Comment discusses some of those ways.

Prognostications must first yield to history. Because civilian nuclear policy in the United States is singular among the nations, prophetic discussions must proceed from a preliminary examination of this unique past. This examination proceeds along twin lines: first, against the statutory background of federal nuclear policy, and second, against the backdrop of federal court decisions interpreting the statutory corpus.

II. FEDERAL NUCLEAR POLICY: IN CAPSULE[4]

A. *The Atomic Energy Acts of 1946 & 1954*

Prior to 1954, sole control and responsibility over nuclear industry

3. The 1980 measure was defeated by a vote of 233,198 to 161,181. The 1982 measure was defeated by a somewhat smaller margin, 256,124 to 201,617. Memorandum to House Democrats by Dan A. Gwadosky, Assistant Majority Leader of the Maine House of Representatives (September 29, 1987) (on file with the *Maine Law Review*).

4. Many articles have examined various aspects of the federal-state nuclear saga. *See, e.g.*, Meek, *Nuclear Power and State Radiation Protection Measures: The Impotence of Preemption*, 10 J. ENVTL. L. 1 (1979); Murphy & La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392 (1976); Tribe, *California Declines the Nuclear Gamble: Is Such a State Choice Preempted?*, 7 ECOLOGY L. Q. 679 (1978); Wiggins, *Federalism, Balancing and the Burger Court: California's Nuclear Law as a Preemption Case Study*, 13 U.C. DAVIS L. REV. 3 (1979); Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court*, 75 COLUM. L. REV. 623

resided in federal hands. This continuing federal control was mandated by the Atomic Energy Act of 1946 (1946 Act).[5] The 1946 Act was the logical policy successor of the highly secret wartime nuclear program. As popular history informs us, the so-called Manhattan Project achieved both the first self-sustaining chain reaction and the first workable nuclear weapons.[6] In 1946, the initial jubilation over the Allied victory was just beginning to wane. This decline was marked by a sense of foreboding at the new power. Awareness of the desolation wrought at Hiroshima and Nagasaki and the realization that former wartime allies now were entrenched along lines of mutual hostility spurred the development of nuclear technology under continued federal control. Though the 1946 Act itself formally transferred control to the newly formed civilian Atomic Energy Commission (AEC),[7] this development was more formalistic than real; since the federal government retained actual ownership of all nuclear materials and facilities, and since civilian participation was limited to contractual work performed for the government, the monopoly continued. Because of this emphasis in the 1946 Act, there was little need to articulate regulations concerning possible state or civilian participation.

Between 1946 and 1954, significant events transpired to change American nuclear policy. In 1949, the American monopoly on nuclear weapons ended when the Soviet Union detonated its first device,[8] and the rush began to develop the "super," the name given to the thermonuclear, or hydrogen bomb.[9] Because of high-pitched

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(1975); Note, *State Regulation of Nuclear Power Production: Facing the Preemption Challenge From a New Perspective*, 76 NW. U.L. REV. 134 (1981); Note, *Application of the Preemption Doctrine to State Laws Affecting Nuclear Power Plants*, 62 VA. L. REV. 738 (1976). For an excellent article dealing with the current regulatory crisis facing electrical power production generally, see Huber, *Electricity and the Environment: In Search of Regulatory Authority*, 100 HARV. L. REV. 1002 (1987).

5. Atomic Energy Act of 1946, Pub. L. No. 79-585, 60 Stat. 755 (1946).

6. The "Manhattan Project" was a super-secret wartime project to produce a workable nuclear weapon. The origins of the project can be traced to a letter from Albert Einstein to President Franklin Roosevelt, warning the President of advances by German scientists in nuclear technology. Einstein (and others) urged the President to institute a crash program to overcome perceived German superiority. The resulting project cost two billion dollars and utilized an enormous industrial substructure across several states. *See* R. RHODES, THE MAKING OF THE ATOMIC BOMB 304-14 (1986). *See also* R. MILLER, UNDER THE CLOUD: THE DECADES OF ATOMIC TESTING 19 (1986).

7. Atomic Energy Act of 1946, Pub. L. No. 79-585, § 2, 60 Stat. 755, 756-58 (1946).

8. The detonation took place on August 29, 1949, in the Ust-Urt desert, between the Caspian and Aral seas. *See* R. MILLER, *supra* note 6, at 70. This successful test shocked the American government in much the same way that the launch of Sputnik did in 1957. *See* R. MILLER, *supra* note 6, at 71.

9. The American project, led by Edward Teller, produced the first thermonuclear detonation at Eniwetok Atoll in the Marshalls group on October 31, 1952. This first shot, labelled "Mike," produced an explosion equalling 10.3 *million* tons of TNT. The

public concern over these developments, Congress and the Eisenhower Administration began to promote publicly the more positive applications of nuclear technology. The 1954 Act became the centerpiece of the "Atoms for Peace" promotional effort.[10]

The Atomic Energy Act of 1954 (1954 Act)[11] established the basic statutory framework under which the nuclear industry still operates. In a fundamental departure from prior policy, the Congress attempted to involve civilian industries in the utilization of various nuclear materials and technology. The 1954 Act was far-reaching in scope. It totally revised the 1946 Act to encourage and accommodate ownership by civilian industry of both energy production and utilization facilities. Congress founded the new act upon its constitutional powers to provide for the common defense and security and to regulate interstate and foreign commerce.[12] The stated congressional goal was to "promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise."[13] Private sector initiative was supposed to take the lead in technological development under broad federal regulatory and licensing power.[14] The Act clearly contemplated the development and use of nuclear power to generate electricity under the regulatory and licensing oversight of the AEC.[15]

The 1954 Act included no language defining the role of the states in the new world of private participation.[16] It was unclear to what extent (if at all) a state could regulate the nuclear production facilities and materials existing within its borders.[17] Shortly after the Act

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blast vaporized Elugelab Island and ripped a hole in the atoll large enough to fit several buildings the size of the Pentagon. *See* R. MILLER, *supra* note 6, at 107-18.

10. W. SWEET, THE NUCLEAR AGE: POWER, PROLIFERATION AND THE ARMS RACE 21, 113 (1984). The logic of this promotion culminated in Operation "Plowshare", the attempted use of nuclear munitions to move earth for construction purposes. The program was, for a variety of reasons, an unceremonious failure. *See* R. MILLER, *supra* note 6, at 311-13.

11. The Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (1954), (codified as amended at 42 U.S.C. §§ 2011-2096 (1982)).

12. *See* 42 U.S.C. § 2012 (1982).

13. *Id.* § 2011(b) (1982).

14. Such federal licensing procedures are all-inclusive and complex. *See id.* §§ 2131-41 (1982).

15. The Joint Committee on Atomic Energy noted that one of the major reasons for amending the 1946 Act was to encourage private development of nuclear generating facilities. S. REP. No. 1699, 83d Cong., 2d Sess. 3, *reprinted in* 1954 U.S. CODE CONG. & ADMIN. NEWS 3456, 3458.

16. See JOINT COMM. ON ATOMIC ENERGY, SELECTED MATERIALS ON FEDERAL STATE COOPERATION ON THE ATOMIC ENERGY FIELD, 86th Cong., 1st Sess. 3, 3-4 (Comm. Print 1959) ("[W]ith respect to health and safety, the act does not expressly state whether Congress intended, by its enactment, to leave room for state regulation of radiation sources licensed by the AEC, and if so, over what types of sources and to what extent.").

17. Section 272 of the 1954 Act made electric power generated in AEC licensed

became law, state attempts to exercise the usual police powers began.[18] Within five years of the Act's passage, the role of the states required statutory clarification.[19]

B. *The 1959 Amendment: Section 274*

In 1959, Congress amended the 1954 Act with the addition of section 274.[20] This amendment was entitled, "Cooperation with States," and was intended to clarify the states' role in the regulation of nuclear industry.[21] Unfortunately, section 274 did not define areas of express federal preemption, thereby imposing needless uncertainly on the regulatory scheme.

The language of section 274[22] is problematic. Subpart (b) provides that the Commission is empowered to enter into agreements with "the Governor of any State" to discontinue the regulatory authority of the Commission over byproduct materials,[23] source materials,[24]

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facilities and transmitted in interstate commerce subject to the Federal Power Act, *see* 42 U.S.C. § 2019 (1982), but section 271 preserved "the authority [and] regulations of any Federal, State, or local agency with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the Commission . . . ." *Id.* § 2018 (1982). Customary state public utility regulation was thus preserved. *See* S. REP. No. 1699, 83d Cong., 2d Sess. 31, *reprinted in* 1954 U.S. CODE CONG. & ADMIN. NEWS 3456, 3487. Some authorities have concluded that the 1954 Act effectively preempted all state regulation. *See, e.g.*, General Counsel Interpretation of 42 U.S.C. §§ 2012(i) and 2013(d), 10 C.F.R. § 8.4(d) (1988). Because of the Act's silence on the matter, it is impossible to tell whether the drafters of the 1954 Act even considered the possibility of state participation in matters dealing with radiation hazards.

18. For a comprehensive list of state regulatory legislation passed between 1954 and 1957, see Frampton, *Radiation Exposure—The Need for a National Policy*, 10 STAN. L. REV. 7, 29-40 (1957).

19. Such clarification was required because the interim witnessed various proposals to include the states in the brave new world of the friendly atom. By 1958, ten states had adopted a model act on radiation standards. Frampton, *supra* note 18, at 36. This model act was adopted by the New England Governor's Conference. Maine adopted the model act with supplementary state rules that stipulated compliance with AEC licensing requirements. The state also established the position of "coordinator" with no provision for salary or expenses. Frampton, *supra* note 18, at 30-31.

20. Act of Sept. 23, 1959, Pub. L. No. 86-373, 73 Stat. 688 (1959) (codified at 42 U.S.C. § 2021 (1982)).

21. General Counsel Interpretation, *supra* note 17, at 8.4(c).

22. 42 U.S.C. § 2021 (1982).

23. Byproduct material is defined as "(1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." *Id.* § 2014(e) (1982).

24. Source material is defined as "(1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 2091 of this title to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time." *Id.* § 2014(z) (1982).

and special nuclear materials "in quantities not sufficient to form a critical mass."[25] Such "turnover agreements" give the states complete control over these materials, subject to revocation only if the Commission determines that the state has not adequately protected the public health and safety.[26] The most important restriction upon state regulatory authority under such agreements is contained in section 274(c):

> No agreement entered into pursuant to subsection (b) of this section shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—
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> (1) the construction and operation of any production or utilization facility;
>
> (2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;
>
> (3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;
>
> (4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.[27]

The final, unnumbered paragraph of section 274(c) grants the Commission authorization to require any "manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material" to obtain Commission licensing approval before transfer of any such product, regardless of any federal-state agreement under section 274(c)(1)-(4). To summarize, no agreement formulated under section 274 will be allowed "to discontinue the Commission's authority" over highly technical or dangerous matters, but under such agreements, less dangerous tasks may be delegated to the states under the ultimate

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25. Special nuclear material is defined as "(1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 2071 of this title, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material." *Id.* § 2014(aa) (1982). Critical mass is the amount of enriched fissionable material which, in proper configuration, is sufficient to allow a self-sustaining chain reaction. For the technical specifications concerning critical mass, see 10 C.F.R § 150.11 (1988).

26. 42 U.S.C. § 2021(j) (1982). The states that implement agreements are expected to develop plans that are "coordinated and compatible" with the Commission. This is not explained in the statute, but it is evident that such programs are supposed to avoid "conflict, duplication, or gaps." S. REP. No. 870, 86th Cong., 1st Sess. 12, *reprinted in* 1959 U.S. CODE CONG. & ADMIN. NEWS 2872, 2882 [hereinafter *1959 Senate Report*].

27. 42 U.S.C. § 2021(c) (1982).

authority of the Commission. Concurrent responsibility is therefore possible.[28]

In addition to subsections (b) and (c), subsection (k) provides that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards."[29] As the Supreme Court would later make clear, "[s]ection 274(k), by itself, limits only the pre-emptive effect of 'this section', that is, [section] 274, and does not represent an affirmative grant of power to the States."[30] However, "the exact bounds of state regulation for these 'other' purposes, which may have an incidental effect on materials or facilities licensed by the Commission, cannot be readily determined. But it is only in this regard that section 274 leaves the precise extent of preemption to be answered by the courts."[31] While there is no overt grant of power, the nature of the language insures that incidental state regulation will have an effect upon the matters within exclusive federal control.[32]

According to the legislative history of the 1959 Amendment, express preemption was actively considered in the drafting of the bill. As the hearings on the amendment make clear, the drafters of the bill decided not to articulate the precise scope and extent of express federal preemption.[33] At the hearings, counsel for the AEC stated

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28. *See* JOINT COMM. ON ATOMIC ENERGY, SELECTED MATERIALS ON FEDERAL-STATE COOPERATION IN THE ATOMIC ENERGY FIELD, *supra* note 16, at 26.

29. 42 U.S.C. § 2021(u) (1982). For a detailed description of the committee debate over this subsection, see Murphy & La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392, 404-405 (1976).

30. Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 210 (1983).

31. Murphy & La Pierre, *supra* note 29, at 405.

32. Later legislation would expressly allow states to regulate certain radiation hazards. The 1977 amendments to the Clean Air Act contain one such example. Under these amendments, states are authorized to regulate radioactive air pollutants from nuclear plants. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685, 722 (1977) (codified at 42 U.S.C. §§ 7416, 7422 (1982)).

33. This decision was evident in the testimony presented before the joint committee. The following exchange took place between Robert Lowenstein from the AEC's Office of the General Counsel and David Toll, staff counsel of the joint committee:

> Mr. TOLL. [O]n the question of reactors, does this bill go far enough? Does it really clear the air as to whether or not the States have authority to license reactors and control shipments in interstate commerce? Should there be a statement that these activities are expressly preempted to the Federal Government?
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> Mr. LOWENSTEIN. Under this bill which gives explicit reference to the interests of the Federal and State governments, we think it would be fairly apparent, as many of us now believe under the existing Atomic Energy Act, that there has been an area of preemption. We considered the desirability of writing the kind of provision you suggested, Mr. Toll, and we decided against it, primarily for the reason that it is practically impossible to try to

that the imprecise language of section 274 should be adopted with the uncertainties left for judicial resolution.[34]

The ambiguous language of section 274 also makes unclear whether *any* preemptive effect was intended by the drafters of the legislation.[35] This uncertainty is partially alleviated by an examination of the legislative history, which seems to indicate that a generalized preemption was intended, though the fringe discussions would be relegated to the courts.[36] There is some evidence to indicate that

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> define, taking into account all of the various gray areas and special circumstances that might arise, where these areas of preemption should begin or end.

Hearings Before the Joint Comm. on Atomic Energy on Federal-State Relationships in the Atomic Energy Field, 86th Cong., 1st Sess. 307 (1959) [hereinafter *1959 Hearings*].

34. The incipient problems with the language of section 274(c) were recognized by Mr. Toll:

> Mr. TOLL. [Section 274(c)] could be clarified by instead of just saying, "No agreement shall provide for discontinuance of authority by the Commission," it could say that and go further and say that "The Commission shall have sole responsibility for regulation with respect to," and then list the same activities. Then the States would know . . . that these are areas in which they are to stay out.
>
> Mr. LOWENSTEIN. We thought that this act without saying in so many words did make clear that there is preemption here, but we have tried to avoid defining the precise extent of that preemption, feeling that it is better to leave these kinds of detailed questions perhaps up to the courts later to be resolved.

Id. at 307-308.

35. On its face, the language of section 274 does not specify whether express preemption, partial preemption, or concurrent jurisdiction is the format of the new order. *See* 42 U.S.C. § 2021 (1982). Subsection (c) specifies that the Commission "shall retain authority and responsibility" with respect to the list of activities in the subsection, but it does not expressly preempt state activity in the same area, as there is no negative language forbidding state activities in the same areas. *Id.* § 2021(c) (1982). Subsections (b) and (c) do not allow the states to discontinue federal authority in the specified areas, but they leave the door ajar to concurrent regulation by the states. *Id.* § 2021(a), (c) (1982). *See also supra* notes 22-27 and accompanying text. Likewise, subsection (k) is a positive regulation, stating what states are allowed to do, rather than what they are not allowed to do. *Id.* § 2021(k) (1982). *See also* Note, *State Regulation of Nuclear Power Production: Facing the Preemption Challenge From a New Perspective*, 76 NW. U.L. REV. 134, 147 (1981); *supra* notes 29-32 and accompanying text.

36. The testimony of certain key players in the 1959 Amendment process makes clear that some degree of preemption was considered desirable. Consider the testimony of Mr. Lowenstein while testifying concerning subsection (k):

> Subsection (k) is included in order to provide formal statutory recognition of the fact that even with respect to the reserved areas which the Commission would continue to regulate, and which to some extent would be preempted from State regulation, nonetheless, the States have a very real interest in these activities.

1959 Hearings, *supra* note 33, at 312.

concurrent jurisdiction was initially viewed with disfavor[37] and this view seems to have been incorporated into the language discussing subsection (b) in the final Senate report.[38] It is unclear whether this language may be applied to the rest of section 274.

To summarize, the Atomic Energy Act of 1954 laid the groundwork for private participation in nuclear technology. As an adjunct to that policy, the 1959 Amendment provided guidelines for state participation in the regulatory aspects of that policy. Harmonizing subsections (b), (c), and (k) was the primary problem faced by courts in later years. The 1959 Amendment reflected a typical American political compromise:[39] if the exact boundaries of federal-state participation could not be articulated, then general guidelines would be drafted with the courts as the case-by-case arbiters of territorial disputes.[40] In the years that followed, this is precisely what occurred.

C. *The Courts and Section 274*

Courts have interpreted section 274 in differing ways. Because section 274 lacks firm definitional contours, courts have, in varying locales, interpreted it both favorably and unfavorably to the states.[41]

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37. While testifying concerning the nature of section 274(b), AEC Commissioner John S. Graham noted that it would be "undesirable to provide for the exercise of dual or concurrent jurisdiction." *Id.* at 290.

38. The report noted that:

> [i]t is not intended to leave any room for the exercise of dual or concurrent jurisdiction by States to control radiation hazards by regulating byproduct, source, or special nuclear materials. The intent is to have the material regulated and licensed either by the Commission, or by the State and local governments, but not by both.

1959 Senate Report, *supra* note 26, at 9, *reprinted in* 1959 U.S. CODE CONG. & ADMIN. NEWS 2872, 2879. Mr. Lowenstein, while groping for metaphors, stated that the principal reason for rejecting concurrent jurisdiction was safety:

> Concurrent jurisdiction would be wasteful of manpower . . . . It would be wasteful of funds. We think it leads to divided responsibility and may lead to bad safety controls because you have too many cooks in the broth, so to speak, without any one level of government having a primary responsibility for it to assure that these uses of materials are appropriately regulated.

1959 Hearings, *supra* note 33, at 315.

39. This type of compromise approach was dubbed "flexible federal supremacy" in Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court*, 75 COLUM. L. REV. 623 (1975).

40. As the testimony from the 1959 hearings suggests, the many difficulties in identifying the fringe area of preemption led the lawmakers to abandon exact preemption language completely. *See supra* notes 33 & 34.

41. *See, e.g.*, Northern Cal. Ass'n to Preserve Bodega Head & Harbor, Inc. v. Public Utils. Comm'n, 61 Cal. 2d 126, 390 P.2d 200, 37 Cal. Rptr. 432 (1964) (safety analysis of reactor siting plan is nonradiological in nature and is within the scope of state review); United States v. City of New York, 463 F. Supp. 604 (S.D.N.Y. 1978) (city ordinance requiring health and safety license before operating university reactor is not a nonradiological siting requirement; rather, it is an attempt to regulate radio-

If the court finds that the state regulation falls within the ambit of subsection (k) (state regulation of non-radiological hazards), then the statute survives.[42] If, on the other hand, the court determines that the state statute falls outside the reach of subsection (k), then the state is attempting to regulate a radiation hazard.[43] The court then must decide whether the regulation is an activity over which the AEC "shall retain authority and responsibility" under subsection (c).[44] In the process, courts have exercised broad discretion in determining what constitutes a "radiation hazard" under subsection (k), and on occasion have even attempted to discern the "true purpose" behind a particular state statute.[45]

If a court indeed finds that the state legislative purpose is to regulate radiation hazards, then the court must proceed with a broader preemption analysis based upon section 274(c).[46] Inaugurating an era of raucous nuclear controversy, the most important case dealing with federal preemption is *Northern States Power Co. v. Minnesota*.[47] In *Northern States Power*, the power company applied to the

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logical matters).

42. This was the case in *Bodega Head*. *See supra* note 41. Because "radiation hazard" is never defined in the statute, courts are forced to exercise broad discretion in applying the term. In *Bodega Head*, the court does not give any guidance as to the scope of the term, nor does it explain how attenuated discussions of "safety" might, in reality, be nothing more than regulation of "radiation hazards." The court merely substitutes conclusion for analysis. Northern Cal. Ass'n to Preserve Bodega Head & Harbor, Inc. v. Public Utils. Comm'n, 61 Cal. 2d at 133, 390 P.2d at 204, 37 Cal. Rptr. at 436.

43. This was the situation in *City of New York*. *See supra* note 41. In this case, the city argued that its health ordinance was no more than a nonradiological siting requirement. The court flatly dismissed this assertion by stating "that the City's decision [to enact the ordinance] was based entirely upon the alleged possibility of injury resulting from an accidental release of radiation." United States v. City of New York, 463 F. Supp. at 614. The court grandly announced that it had found an "unmistakable Congressional intent" that such radiological matters be removed from concurrent state or local control. *Id.* at 612. *See also* Note, *State Regulation of Nuclear Power Production: Facing the Preemption Challenge From a New Perspective*, 76 NW. U.L. REV. 134, 153 (1981).

44. 42 U.S.C. § 2021(c) (1982).

45. *See, e.g.*, Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n, 472 F. Supp. 191 (S.D. Cal. 1979). In this case, a state statute was challenged which would deny certification to nuclear power plants until proven technology was developed to dispose of high-level waste from such plants. California argued that the statute was necessary to ensure that the state would not have to "bear the financial risk of funding nuclear power plants which may later be shut down because of inadequate permanent waste disposal facilities." *Id.* at 198. The court rejected the argument and implied that it was a disguise for what was, in reality, an attempt to regulate radiation hazards: "It is scarcely credible that Congress, in enacting section 2021(k), intended to furnish the States with a means of *evading and undermining* the NRC's [Nuclear Regulatory Commission, successor to the AEC] exclusive regulatory authority under section 2021(c)." *Id.* (emphasis added).

46. 42 U.S.C. § 2021(c) (1982). *See supra* text accompanying note 27.

47. 447 F.2d 1143 (8th Cir. 1971), *aff'd mem.*, 405 U.S. 1035 (1972).

Minnesota Pollution Control Agency for a waste disposal permit for its Monticello plant. It was issued subject to stringent restrictions on the level of radioactive liquid and gaseous discharges with the further requirement that the company implement monitoring programs for the detection of such releases. The difficulty was that the conditions imposed by Minnesota covered the same areas as those imposed by the AEC, and were 100 times more stringent.

Minnesota based its argument upon its traditional police powers under the tenth amendment to the U.S. Constitution,[48] stating that it had the power to regulate such discharges for the welfare of its citizens. In this instance, the state made no attempt to cloak its intention to regulate a radiological hazard. The district court held that such regulation was entirely preempted by the federal legislation.[49] The Eighth Circuit agreed.

In this case of first impression,[50] the court was required to decide if the concurrent state regulation could exist alongside its federal counterpart, or whether the federal legislation had completely preempted the state requirements. The Eighth Circuit, basing its discussion on an exposition of classic preemption doctrine,[51] noted that "no physical impossibility of dual compliance with both the AEC and Minnesota regulations governing radioactive discharges from the Monticello plant [was] presented on [the] record."[52] Further, the court noted that, as the parties conceded, and "as an examination of the legislation in question reveals, no provision of the Atomic Energy Act expressly declares that the federal government shall have the sole and exclusive authority to regulate radiation emissions from nuclear power plants."[53]

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48. The tenth amendment to the United States Constitution states that "[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." U.S. CONST. amend X.

49. Northern States Power Co. v. Minnesota, 320 F. Supp. 172 (D. Minn. 1970).

50. The court was well aware that it was setting sail in uncharted waters: "We realize too that our decision may affect future relationships between other states and other public utility companies who enter the still evolutionary field of nuclear reactor energy production." Northern States Power Co. v. Minnesota, 447 F.2d at 1145.

51. The court noted that "'[a] holding of federal exclusion of state law is inescapable and requires no inquiry into congressional design where compliance with both federal and state regulations is a physical impossibility . . . .'" *Id.* at 1146 (quoting Florida Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142-43 (1963)).

52. Northern States Power Co. v. Minnesota, 447 F.2d at 1147.

53. *Id.* The court explained that

> absent inevitable collision between the two schemes of regulation it must be determined whether Congress manifested an intent to displace coincident state regulation in a given area. Where Congress has unequivocally and expressly declared that the authority conferred by it shall be exclusive, then there is no doubt but that states cannot exert concomitant or supplementary regulatory authority over the identical activity.

Id. at 1146. As was previously discussed, subsection (c) of section 274 merely forbids

When the court could detect no actual conflict or express preemption, it then searched for an "implied" preemption based on (1) "the aim and intent of Congress as revealed by the statute itself and its legislative history," (2) "the pervasiveness of the federal regulatory scheme as authorized and directed by the legislation and as carried into effect by the federal administrative agency," (3) "the nature of the subject matter regulated and whether it is one which demands 'exclusive federal regulation in order to achieve uniformity vital to national interest,' " and (4) " 'whether, under the circumstances of [a] particular case [state] law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.' "[54] After analyzing the state legislation from all four perspectives, the court dismissed it as "microcosmic"[55] and affirmed the judgment of the district court.[56] Because of its broad scope, it is hardly surprising that courts of the 1970s utilized *Northern States Power* in their analyses of nuclear issues.[57]

Northern States Power is important chiefly for its application of a broad preemption formula. Though the Eighth Circuit found that concurrent regulation by Minnesota and the federal government was not a physical impossibility, it relied heavily on the concept of "implied preemption"—a preemptive intent discerned in the absence of

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the Commission from relinquishing its authority, and does not provide an exclusive grant of power. *See supra* text accompanying notes 27-30.

54. *Id.* at 1146-47 (citation omitted).

55. *Id.* at 1153.

56. The court noted that, (1) the language of the 1959 Amendment and its legislative history clearly points to shared responsibility only during the duration of a joint agreement with the state, *id.* at 1149; *see also* 42 U.S.C. § 2021(b) (1982); (2) the federal regulatory scheme is pervasive, as demonstrated by the enactment of detailed regulations by the AEC to govern licensing of nuclear power plants, *id.* at 1152-53; (3) the nature of the subject matter is such that it demands uniform regulation in the national interest as demonstrated by statements made in the specific findings by Congress, *id.* at 1153; and (4) that the Minnesota regulations obstruct the clear purpose of the Atomic Energy Act to promote the growth of nuclear generation in the states, *id.* at 1153-54.

57. *See, e.g.*, Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n, 472 F. Supp. 191 (S.D. Cal. 1979) (state statute denying certification to nuclear power plants until waste disposal technology developed is regulation of radiation hazards and thus preempted); Van Dissel v. Jersey Cent. Power & Light Co., 152 N.J. Super. 391, 377 A.2d 1244 (N.J. Super. Ct. Law Div. 1977) (state cannot regulate plant's nuclear cooling system because it is integrally tied to the federally regulated radioactive discharge system); Department of Envtl. Protection v. Jersey Cent. Power & Light Co., 69 N.J. 102, 351 A.2d 337 (1976) (AEC has exclusive jurisdiction over operation of nuclear plants and disposal of highly diluted radioactive water into local estuary); Marshall v. Consumers Power Co., 65 Mich. App. 237, 237 N.W.2d 266 (Mich. Ct. App. 1975) (state regulation of winter fog and ice from reactor cooling pool is nonradiological in nature and thus permissible); Commonwealth Edison Co. v. Pollution Control Bd., 5 Ill. App.3d 800, 284 N.E.2d 342 (Ill. App. Ct. 1972) (statute authorizing regulation and control of atomic radiation from nuclear power plant is preempted by federal legislation).

express legislative instructions.[58] The 1970s witnessed a sea-change in the Supreme Court's approach to preemption problems—the era of expansive federal preemptive powers appeared to be at an end. In previous decisions,[59] the Court preempted state legislation if there was any degree of conflict; the Burger Court practice, by contrast, was to preempt " 'only to the extent necessary to protect the achievement of the aims of the [federal law,]' " since "the proper approach is to reconcile 'the operation of both statutory schemes with one another rather than holding [the state scheme] completely ousted.' "[60] In a series of decisions,[61] the Burger Court sharply narrowed the scope of federal preemption in the absence of an express intent stated in the legislation itself. This change helped set the stage for a new era of state assertiveness in nuclear regulation.[62] With this change in doctrine, *Northern States Power* was emptied of much of its precedential force.

D. Subsequent Legislation

The years following *Northern States Power* witnessed many changes in the climate of opinion concerning the future of nuclear power. The Congress, that perpetual weathervane of public opinion,

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58. Northern States Power Co. v. Minnesota, 447 F.2d at 1146. The Eighth Circuit relied heavily upon Florida Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 143-44, 147-50 (1963) (preemptive intent may be discerned from the statute itself and its legislative history and it must be preempted if the nature of the subject matter demands exclusive federal regulation in order to achieve uniformity vital to national interests), and Hines v. Davidowitz, 312 U.S. 52, 67 (1941) (state law is preempted if it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.").

59. *See supra* note 58. *See also* Rice v. Santa Fe Elevator Corp., 331 U.S. 218 (1947); Castle v. Hayes Freight Lines, Inc., 348 U.S. 61 (1954); Zschernig v. Miller, 389 U.S. 429 (1968); Amalgamated Ass'n of St., Elec., Ry. & Motor Coach Employees v. Lockridge, 403 U.S. 274 (1971).

60. Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Ware, 414 U.S. 117, 127 (1973) (quoting Silver v. New York Stock Exchange, 373 U.S. 341, 357, 361 (1963)).

61. These cases are, in chronological order, Askew v. American Waterways Operators, Inc. 411 U.S. 325 (1973) (Florida water pollution control statute upheld in spite of the "pervasive" federal Water Quality Improvement Act); Goldstein v. California, 412 U.S. 546 (1973) (preemptive power could only be inferred in those matters which are *necessarily* national in import; state regulation may stand where conflicts "may possibly" arise and impermissible situations exist only where conflict "will necessarily" arise); New York State Dep't of Social Servs. v. Dublino, 413 U.S. 405 (1973) (the Court will not presume 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); De Canas v. Bica, 424 U.S. 351 (1976) (preemptive intent cannot be inferred merely from the scope and complexity of a particular statute); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978) (the historic police powers of the state are not to be superseded by a federal act unless that was the clear and manifest purpose of the Congress).

62. This new assertiveness was also based upon subsequent congressional legislation. *See infra* notes 63-104 and accompanying text.

reflected the changes by enacting new legislation that influenced the states' participation in nuclear regulation. These new enactments seemed to indicate that the *Northern States Power* precedent ought to be scrapped, and a new division of state and federal responsibility implemented.

1. *The Energy Reorganization Act of 1974*

Two years after the 1972 *Northern States Power* decision, Congress enacted the Energy Reorganization Act.[63] In a bold sweep, the Act abolished the AEC and transferred its research and development functions to the Energy Research and Development Administration (ERDA)[64] and its regulatory and licensing (safety) functions to the Nuclear Regulatory Commission (NRC).[65] Congress declared that the purpose of the Act was to encourage the development and use of all energy sources.[66] To achieve this end, all existing programs for the development of fossil fuels, solar and geothermal energy, as well as the AEC's program for the development of nuclear technology were transferred wholesale to the ERDA.[67] The practical effect of this change is that nuclear energy became only one of many energy sources whose development Congress decided to encourage.[68] This division of labor is important because with one stroke the Congress removed one of the primary purposes of the 1954 Act cited by courts to find federal supremacy in regulation. The 1954 Act clearly stated that one of its primary purposes was to promote the use of atomic power subject to the common defense and security, and public health and safety.[69] As is readily apparent, the language is active, demonstrating the clear intent of Congress not merely to *allow* for

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63. Pub. L. No. 93-438, 88 Stat. 1233 (1974) (codified as amended at 42 U.S.C. §§ 5801-5851 (1982)).

64. 42 U.S.C. §§ 5811-5821 (1982). The ERDA was subsequently abolished and its functions were transferred to the Department of Energy (DOE) by the Department of Energy Organization Act of 1977, Pub. L. No. 95-91, 91 Stat. 565 (1977) (codified as amended at 42 U.S.C. §§ 7101-7375 (1982)). Both the ERDA and DOE were required to promote the development of a broad spectrum of energy sources, including solar energy. 42 U.S.C. § 5801(a), (e) (1982).

65. *Id.* §§ 5841-5851 (1982 & Supp. IV 1986).

66. *Id.* §§ 5801(a), (b); 5813(1), (2) (1982).

67. *Id.* § 5814(c), (e), (f) (1982).

68. The 1974 reorganization does not affect the will of Congress, expressed in the 1954 Act, to promote the production of electricity by means of nuclear fission.

69. Subsection (a) of section 2011 reads:

> Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that—
> (a) the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security.

42 U.S.C. § 2011(a) (1982). *See also id.* § 2013(d) (1982) (referring to development consistent with the public health and safety).

the development of civilian nuclear technology, but to promote it as well. The policy mandate was therefore expansive: the AEC was to *promote* actively nuclear development while providing for the public safety.

These two values imposed by the 1954 Act sometimes provided fertile ground for conflict. Because the Act provided for *both* promotion *and* safety, courts inevitably are left with the task of balancing two policies which are not always clear and compatible. The two approaches require differing conceptual standpoints. In the former, federal regulations are viewed as the *maximum*, beyond which the states may not additionally regulate. In the latter, federal regulations are merely viewed as a *minimum* standard established by the 1954 Act, to which states may add in harmony with overall federal objectives.[70]

As was noted above,[71] the 1974 Act did not specifically abolish nuclear energy promotion as originally envisioned under the 1954 Act,[72] but it had the indirect effect of reducing nuclear energy to only one of many alternate sources of energy.[73] The Reorganization Act "took the federal government out of the business of promoting atomic power in preference to other sources of energy."[74] The 1974 Act most certainly limits courts' prerogative to read broad prodevelopment purposes into the 1954 Act. Courts probably can no longer preempt concurrent state regulation merely because it may

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70. *See* Note, *State Regulation of Nuclear Power Production: Facing the Preemption Challenge From a New Perspective*, 76 NW. U.L. REV. 134, 164 (1981). Apparently, the dissent in *Northern States Power* recognized this distinction: "The licensing power carries with it the right to impose conditions on the private use of nuclear energy. The *minimum* standards imposed by the government must be met and cannot be lowered by a state or an agency thereof." Northern States Power Co. v. Minnesota, 447 F.2d at 1154 (Van Oosterhout, J., dissenting) (emphasis added).

71. *See supra* text accompanying notes 63-68.

72. For the exact language of the 1954 Act, see *supra* note 69.

73. The 1974 Act states "that the general welfare and the common defense and security require effective action to develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations . . . ." 42 U.S.C. § 5801(a) (1982).

74. Tribe, *California Declines the Nuclear Gamble: Is Such a State Choice Preempted?* 7 ECOLOGY L.Q. 679, 697, n.97 (1979). In addition, the ERDA was merged with the newly formed Department of Energy in 1977 by means of the Department of Energy Organization Act. *See* 42 U.S.C. §§ 7101-7375 (1982 & Supp. IV 1986). The Act directs the federal government to accord considerable weight to state energy programs. Section 7113 states in full:

> Whenever any proposed action by the Department conflicts with the energy plan of any State, the Department shall give due consideration to the needs of such State, and where practicable, shall attempt to resolve such conflict through consultations with appropriate State officials. Nothing in this chapter shall affect the authority of any State over matters exclusively within its jurisdiction.

42 U.S.C. § 7113 (1982).

be "frustrating a Federal mandate."[75] Thus, the Act further emptied the *Northern States Power* decision of precedential force.

2. *The Clean Air Act Amendments of 1977*

In 1977, Congress amended the Clean Air Act[76] to clarify state regulatory powers over radioactive pollutants[77] "which may reasonably be anticipated to endanger public health . . . [or] . . . to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness . . . ."[78] Under the amended Act, the Environmental Protection Agency (EPA) is required to assign regulatory responsibility over commercial nuclear facilities to states which have formulated guidelines which the Agency has approved as adequate.[79] With this accomplished, states assume direct regulatory responsibility over nuclear facilities and materials. The states are authorized to devise regulations which are as strict (or stricter) than those of the EPA itself.[80] The Act's legislative history declares that Congress expressly rejected the *Northern States Power* decision in the area of radioactive air pollution.[81] Since the sole issue in *North-*

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75. *See, e.g.*, Marshall v. Consumers Power Co., 237 N.W.2d 266, 280 (Mich. Ct. App. 1975). In ruling that the state of Michigan was not preempted from regulating nonradiological hazards, the court said:

> [T]he license granted by the AEC is merely a permit to construct a power plant, *not a Federal order to do so.* Therefore, a state which, pursuant to its Atomic Energy Act power to regulate nonradioactive hazards, stopped a power company from operating until it met reasonable state standards or abated a nuisance under state law *could not be frustrating a Federal mandate.*

Id. (emphasis added). For an example of the pre-1974 Act point of view, see Northern States Power Co. v. Minnesota, 447 F.2d 1143, 1154 (8th Cir. 1971), where the court said:

> Were the states allowed to impose stricter standards on the level of radioactive waste releases discharged from nuclear power plants, they might conceivably be so overprotective in the area of health and safety as to unnecessarily stultify the industrial development and use of atomic energy for the production of electric power.

Id. Though the pro-development portions of the 1954 Act have not technically been repealed by the 1974 Act, it is still possible to say that they have been redefined by subsequent legislation. Some argue that this is indeed the case. *See* Brief for Appellees at 52-53, Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n, 659 F.2d 903 (9th Cir. 1981) (No. 79-3382).

76. Clean Air Act of 1977, Pub. L. No. 95-95, 91 Stat. 685 (1977) (codified in scattered sections of 42 U.S.C.).

77. Including source, by-product and special nuclear materials. 42 U.S.C. § 7422 (1982). For definitions of these terms, see *supra* notes 23-25.

78. 42 U.S.C. § 7422 (1982).

79. *Id.* §§ 7412(d)(1), 7422 (1982).

80. *Id.* § 7416 (1982).

81. The Joint Explanatory Statement of the Committee on Conference noted:

> [A]ny State, or political subdivision thereof, may establish standards more stringent than Federal, of where a Federal standards [sic] has not been es-

ern States Power dealt with the preemption of state regulation of such pollution, there seems to be little authority left in the decision.

3. *The Low-Level Radioactive Waste Policy Act of 1980*

Among other supervisory grants of power over nuclear energy given to the states,[82] the Congress in 1980 enacted the Low-Level

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tablished, may establish any standards they deem appropriate. Thus the provision would not preempt states and localities from setting and enforcing stricter air pollution standards for radiation than the Federal standards, and would not follow the holding in *Northern States Power Co. v. State of Minnesota* . . . in the context of radioactive air pollution.

H.R. REP. No. 564, 95th Cong., 1st Sess. 143 (citation omitted), *reprinted in* 1977 U.S. CODE CONG. & ADMIN. NEWS 1502, 1523-24.

82. These include:

a. Safe Drinking Water Act of 1974, Pub. L. No. 93-523, 88 Stat. 1661 (1974) (codified as amended at 42 U.S.C. § 300f-300j-11 (1982 & Supp. IV 1986)). The Act calls for a combined EPA-state effort to regulate allowable contaminants in public water supplies. Radioactive materials fall within the congressional definition of contaminants. 42 U.S.C. § 300f(6) (1982). *See also* H.R. REP. No. 1185, 93d Cong., 2d Sess. 16, *reprinted in* 1974 U.S. CODE CONG. & ADMIN. NEWS 6454, 6469. The Act requires the enforcement of standards by state regulatory agencies to be as strict as federal EPA standards and the Act places enforcement responsibility for public water systems upon the states. 42 U.S.C. § 300(g)(2)(a) (1982).

b. Hazardous Materials Transportation Act of 1974, Pub. L. No. 93-633, 88 Stat. 2156 (1974) (codified at 49 U.S.C. §§ 1801-1812 (1982 & Supp. III 1985)). The Act allows "State[s] or political subdivision[s] thereof" to regulate transportation of radioactive material provided "that such requirement (1) affords an equal or greater level of protection to the public than is afforded by the requirements of this Chapter or of regulations issued under this Chapter and (2) does not unreasonably burden commerce." 49 U.S.C. § 1811(b) (1982). If any state regulation is "inconsistent with any requirement set forth in this Chapter . . . [it] is preempted." *Id.* § 1811(a) (1982). For a case arising under this Act, see City of New York v. United States Dep't of Transp., 715 F.2d 732 (2d Cir. 1983) (DOT decision to ship spent nuclear fuel through New York City upheld; city's prohibition of such shipment preempted).

c. Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. No. 95-604, 92 Stat. 3021 (1978) (codified in various sections of 42 U.S.C.). This Act addresses a problem not recognized by the drafters of either the 1954 Act or the 1959 Amendments. Mill tailings are the residue remaining from the initial refining process that produces enriched nuclear fuel suitable for utilization in nuclear reactors. Before this Act, mill tailings were not materials subject to federal regulation, and tailings could only be regulated via licensing of uranium enrichment plants as "production facilities." *See* 42 U.S.C. § 2014(v) (1982). Accumulated piles of tailings are an increasing hazard and Congress attempted to rationalize its regulatory handling of them. The Act defines tailings as "byproduct material," *see* 42 U.S.C. § 2014(e) (1982), subject to "turnover agreements" between the NRC and participating states, with the proviso that the resulting state regulation be at least as stringent as its federal counterpart. 42 U.S.C. § 2021(o)(2) (1982). For a definition of "byproduct materials," see *supra* note 23. "Turnover agreement" is the shorthand term given agreements between the AEC (now NRC) and individual states concerning the handling of nuclear materials. *See supra* text accompanying note 26.

d. Powerplant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, 92 Stat. 3289 (1978) (codified as amended at 42 U.S.C. §§ 8301-8483 (1982 & Supp. IV 1986)). This Act prohibits (with specified exceptions) the use of natural gas or petroleum in

Radioactive Waste Policy Act.[83] This Act vests primary responsibility for the management of low-level nuclear waste[84] to the states. Except for wastes generated by the military or by federal research activities, each state is now responsible for developing repositories for all low-level wastes produced within the state.[85] One of the primary goals behind the Act is to encourage states to manage waste on a regional basis.[86] Therefore, the Act encourages the formation of regional compacts for the establishment and operation of disposal facilities.[87] Compacts may be formed after January 1, 1986, and under such pacts, states may exclude waste from noncompact states.[88] Such compacts are established under congressional approval and require review and reauthorization every five years.[89] The Act signifies an important change from prior waste management policy,[90] the implications of which are clear: Congress has declared its intention to allow state participation in a nuclear industry previously under exclusive federal control. This includes primary state

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any new power plant after 1989. Future plants must utilize coal or some other "alternate" fuel, including uranium. Use of petroleum or natural gas is only permitted if "the construction or operation of such a facility using coal or any other alternate fuel is infeasible because of a State or local requirement . . . ." 42 U.S.C. § 8322(b) (1982). The statute, therefore, "provides federal deference to state choices." Meek, *Nuclear Power and State Radiation Protection Measures: The Impotence of Preemption*, 10 J. ENVT'L L. 1, 32 (1979).

83. Pub. L. No. 96-573, 94 Stat. 3347 (1980) (codified as amended at 42 U.S.C. § 2021b-2021j (1982 & Supp. IV 1986)). The purpose of the Act is to "[e]stablish a program for Federal storage of spent fuel from civilian nuclear powerplants, [and] to set forth a Federal policy and initiate a program for the disposal of nuclear waste from civilian activities . . . ." S. REP. No. 548, 96th Cong., 2d Sess. 1, *reprinted in* 1980 U.S. CODE CONG. & ADMIN. NEWS 6933, 6933. This Act was subsequently amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985, Pub. L. No. 99-240, 99 Stat. 1842, (1986) to improve the mechanics of state compact arrangements.

84. Under the Act, low-level nuclear waste is defined as radioactive waste "not classified as high-level radioactive waste, . . . spent nuclear fuel, or byproduct material . . . ." 42 U.S.C. § 2021b(2) (Supp. IV 1986). Typically, low-level waste is generated by secondary, nonradioactive materials coming in close contact with more radioactive materials. This includes water from the primary loop of the reactor, tools, clothing or machinery used to handle nuclear products. Such items are either contaminated by the products they contact, or become radioactive through neutron bombardment. As of 1978, about 40% of the low-level waste sent to disposal sites came from sources other than those involved in the nuclear reactor fuel cycle, such as hospitals, industry or research institutions. NRC ANN. REP. 97 (1978).

85. 42 U.S.C. § 2021d(a)(1) (Supp. IV 1986).

86. *Id.* § 2021d(a)(1) (Supp. IV 1986).

87. *Id.* § 2021d(a)(2) (Supp. IV 1986).

88. *Id.* § 2021e(a)(3)(B) (Supp. IV 1986).

89. *Id.* § 2021d(d) (Supp. IV 1986).

90. Before the Act's passage, there were only six licensed low-level disposal sites in the entire United States. Two had been closed because of substandard safety records, and a third, in Sheffield, Illinois, had reached its approved capacity. NRC REPORT, *supra* note 84, at 98.

responsibility for the solution of the most intractable problem facing the nuclear program from its inception: what to do with ever-increasing amounts of nuclear waste.[91] Delegation of low-level waste management demonstrates that Congress no longer intends to "occupy completely" the field for preemption purposes.[92]

4. *The Nuclear Waste Policy Act of 1982*

The Nuclear Waste Policy Act of 1982[93] is designed to establish a federal program for the development of disposal sites for high-level nuclear waste and spent fuel assemblies. The Act authorizes permanent geologic repositories for disposal of such materials,[94] provides for licensing and expansion of interim storage,[95] authorizes research and development,[96] and provides a new scheme for financing.[97] The Act requires the NRC to recommend disposal sites to the President, who will in turn submit to Congress such recommended sites within a statutory timetable, though the statute does allow deadline exten-

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91. Congress has recognized that permanent disposal of such waste "has been a clear requirement since the beginning of the nuclear weapons program during World War II." S. REP. No. 548, 96th Cong., 2d Sess. 13, *reprinted in* 1980 U.S. CODE CONG. & ADMIN. NEWS 6933, 6936. In spite of this clear requirement for coherent policy, Congress waited until 1982 to legislate "a broad nuclear waste management policy with specific goals and objectives." *Id.* at 15, 1980 U.S. CODE CONG. & ADMIN. NEWS at 6938. Until that time, "nuclear waste management policy was established by each Administration." *Id.* A later congressional committee noted:

> An opiate of confidence that the technical issues effecting [sic] nuclear waste disposal were easily resolvable for decades rendered Federal officials responsible for providing the facilities apathetic towards addressing those technical issues, and unprepared for the immense social and political problems which would obstruct implementation of a serious repository development program.

H.R. REP. No. 491, 97th Cong., 2d Sess. 26, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 3792, 3792-93. Though this language was used in a report addressing high-level waste concerns, it is fairly indicative of the federal government's ad hoc policy since World War II concerning *all* nuclear waste.

92. For the doctrine of "occupation preemption," see Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947).

93. Pub. L. No. 97-425, 96 Stat. 2201 (1982) (codified as amended at 42 U.S.C. §§ 10101-10226 (1982 & Supp. IV 1986)).

94. 42 U.S.C. §§ 10131-10145 (1982 & Supp. IV 1986). The legislative history of the Act indicates that the Congress is expressly committed

> to a waste disposal technology relying on primary geologic containment provided by a solid rock formation located deep underground, together with containment by engineered barriers . . . which will provide safe containment of the waste without reliance on human monitoring and maintenance after an initial period of testing and subsequent closure of the repository.

H.R. REP. No. 491, 97th Cong., 2d Sess. 30, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 3792, 3796.

95. 42 U.S.C. §§ 10151-10157 (1982).

96. *Id.* §§ 10191-10203 (1982).

97. *Id.* §§ 10222-10223 (1982).

sions of up to one year.[98] Only after such sites have been recommended by the President may applications to construct disposal sites be made to the NRC. The NRC has up to four years to act upon a construction application and the time periods may be further extended by state or Indian tribe disapproval of the recommended site, followed by congressional action on the state's or tribe's disapproval of the recommended site.[99] The Act allows the operators of civilian nuclear plants to construct additional temporary storage ponds on-site until permanent disposal sites are completed,[100] and further requires nuclear plant owners to maximize their use of such on-site storage facilities as well as transfer spent fuel to other plant sites with unused storage capacity.[101]

The Act is significant for two reasons: first, it provides for a strong state voice in choosing a permanent disposal site. Though the Act assumes ultimate federal responsibility for a comprehensive solution to a complex problem,[102] it also contemplates a state veto that can only be overridden by explicit congressional action.[103] Second, it represents the first comprehensive federal attempt to provide a solution for a waste impasse which could spell ultimate frustration for one of the primary purposes of the 1954 Act: to promote the development of nuclear power.[104]

III. JUDICIAL SCRUTINY OF THE NEW STATE ASSERTIVENESS

A. Pacific Gas & Electric

With the tacit encouragement of the courts and federal government,[105] many states, Maine included, have entered the nuclear regulatory field with a vengeance.[106] Typical of such laws are the 1976

98. *Id.* § 10134 (1982).

99. *Id.* §§ 10134(d), 10137(c) (1982).

100. *Id.* §§ 10152-10153 (1982).

101. *Id.* § 10154 (1982).

102. *Id.* § 10131(b)(2) (1982).

103. *Id.* § 10135 (1982). The legislative history states that the federal government will have "[u]ltimate . . . responsibility for high level nuclear waste disposal, including the ultimate right to override a state or tribal site veto by joint resolution of Congress and the President." H.R. REP. No. 491, 97th Cong., 2d Sess. 30, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 3792, 3796.

104. 42 U.S.C §§ 2011, 2013(d) (1982). *See supra* note 69 and accompanying text.

105. *See supra* notes 63-104 and accompanying text.

106. *See* ME. REV. STAT. ANN. tit. 10, § 253 (1980) (moratorium imposed on new plant construction until acceptable means of waste disposal found by federal government). *See, e.g.*, FLA. STAT. ANN. § 404.056 (West 1986 & Supp. 1988) (land radiation emission standards); MONT. CODE ANN. § 75-3-101 to 75-3-405 (1987) (general nuclear regulation); OR. REV. STAT. § 469.525 (1985) (radioactive waste disposal facilities); R.I. GEN. LAWS § 42-64-14.1 (1984) (final approval to build nuclear plant reserved to the general assembly); S.D. CODIFIED LAWS ANN. § 34-21-1.1 (1986) (waste disposal); TEX. WATER CODE ANN. § 26.027(a) (Vernon Supp. 1988) (waste disposal); VT. STAT. ANN. tit. 30, § 248(e) (1986) (final approval to construct nuclear plant reserved to general

amendments[107] to California's Warren-Alquist Act[108] (known as the "Nuclear Laws") which only apply to nuclear power plants. In *Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission*,[109] the Supreme Court granted certiorari to determine whether sections 25524.1(b) and 25524.2 of the Nuclear Laws were ripe for judicial review and whether they were preempted by the Atomic Energy Act.[110] Petitioners Pacific Gas & Electric Company and Southern California Edison Company both claimed that the uncertainties caused by the Nuclear Laws caused them to cancel plans to build nuclear plants.[111] The Court first determined that only section 25524.2 was ripe for review. Section 25524.2 imposes a moratorium on the certification of new nuclear plants until the state's Energy Commission "finds that there has been developed and that the United States through its authorized agency has approved and there exists a demonstrated technology or means for the disposal of high-level nuclear waste . . . ."[112]

The petitioners presented three main arguments in favor of preempting the moratorium statute. First, they argued that because the statute "regulates construction of nuclear plants and because it is allegedly predicated on safety concerns—it ignores the division between federal and state authority created by the Atomic Energy Act, and falls within the field that the federal government has preserved for its own exclusive control."[113] In response, the Court noted the

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assembly).

107. These provisions impose a moratorium on the certification of any new nuclear power plants until the state Energy Commission submits certain findings to the California legislature for approval. Section 25524.1(a) prohibits the certification of nuclear plants requiring fuel reprocessing until the Commission finds that a federally approved method of reprocessing exists; section 25524.1(b) requires case-by-case analysis of whether facilities are available for spent fuel. Section 25524.2 prohibits certification of all types of nuclear plants until the Commission finds that a federally approved method of disposing of nuclear wastes is available; section 25524.3 prohibits the certification of all types of nuclear plants until the Commission has completed and submitted to the legislature a completed study on the feasibility of undergrounding and berm containment of reactors. CAL. PUB. RES. CODE § 25524 (West 1986 & Supp. 1988).

108. The Warren-Alquist State Energy Resources Conservation and Development Act (Nuclear Laws), CAL. PUB. RES. CODE §§ 25000-25986 (West 1986 & Supp. 1988). This law, enacted in 1974, established a five-member Energy Commission to coordinate regulation and research to ensure a reliable source of electrical power.

109. 461 U.S. 190 (1983).

110. *Id.* at 200.

111. Pacific Gas & Electric Co. cancelled a specific project known as "Stanislaus." Southern California Edison Co. spent no money, but abandoned general plans to build plants only known then as "Nuclear 1" and "Nuclear 2." Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 489 F. Supp 699, 701-702 (1980).

112. Nuclear Laws, § 25524.2(a).

113. Pacific Gas & Elec. Co, 416 U.S. at 204.

absence of any express language in the Atomic Energy Act requiring states to construct or authorize nuclear power plants, or to prevent states from deciding against the construction of any further plants.[114]

Petitioners argued further that the Act was designed to uphold the federal government as the only regulator of *all* nuclear matters and that the California statute falls within the preempted area. The Court rejected this contention and began its analysis with an affirmation of traditional state powers, absent an express intent to supersede them by the language of the Atomic Energy Act.[115] Though the federal government may, by congressional intent expressed in the amended Act, continue to regulate radiological aspects of the construction and operation of a nuclear plant, states still retain their traditional responsibilities in regulating utilities. These responsibilities include determining the need for new power facilities, their economic feasibility and rates and services. Indeed, " '[t]here is little doubt that under the Atomic Energy Act of 1954, state public utility commissions or similar bodies are empowered to make the initial decision regarding the need for power.' "[116]

The Court further declared that both the 1946[117] and 1954[118] Atomic Energy Acts *only* gave the AEC exclusive jurisdiction to license "the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials."[119] According to the Court, the AEC itself was not given authority over the generation of electricity itself or over the determination of the economic viability of future plant construction.[120] These considerations only become the concern of the federal government if they affect " 'national security, public health, and safety.' "[121] For this conclusion, the Court relied upon the explicit language of the Atomic Energy Act[122] and its subsequent amend-

114. *Id.* at 205.

115. *Id.* at 205-206 (citing Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)).

116. *Id.* at 206 (quoting Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 550 (1978)).

117. *See supra* notes 6-8 and accompanying text.

118. *See supra* notes 11-19 and accompanying text.

119. Pacific Gas & Elec. Co., 461 U.S. at 207.

120. *Id.*

121. *Id.* (quoting Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 550 (1988)).

122. Specifically, the Court relied upon section 271 of the 1954 Act which provides: " 'Nothing in this chapter shall be construed to affect the authority or regulations of an Federal, State or local agency with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the Commission . . . .' " *Id.* at 208 (quoting 42 U.S.C. § 2018 (1982)). The Court also noted that statements on the floor of Congress confirm that state power over the production of electricity was not displaced unless it involved safety. *Id.*

ments.[123] As the Court stated, "the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation; the States exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, rate making, and the like."[124]

The Court continued its preemption discussion with an interpretation of the California statute itself. The Court emphasized that it did not interpret the moratorium statute as seeking "to regulate the construction or operation of a nuclear powerplant," but rather was aimed at economic concerns.[125] As such, it falls outside the federally occupied field of nuclear safety.[126] The Court made clear that any attempt to regulate nuclear plant operation and construction would be impermissible, even if done out of non-safety concerns, due to the NRC's exclusive authority over such matters.[127] The Court rejected the notion that "a State may completely prohibit new construction until its safety concerns are satisfied by the Federal Government."[128] Utilizing a familiar preemption formula, the Court stated that when the federal government has occupied an entire field or an identifiable portion of it, the test is whether " 'the matter on which the State asserts the right to act is in any way regulated by the Federal Act.' "[129] Any state judgment that nuclear power is not safe enough to be further developed "would conflict directly with the countervailing judgment of the NRC . . . that nuclear construction may proceed notwithstanding extant uncertainties as to waste disposal."[130] Similarly, a state prohibition for safety reasons "would also be in the teeth of the Atomic Energy Act's objective to insure that nuclear technology be safe enough for widespread development and use . . . ."[131]

In finding a non-safety rationale for the statute, the Court turned to a report by the California Assembly Committee on Resources, Land Use and Energy (Committee).[132] In the report, the Committee basically viewed the problem as one where non-disposable wastes accumulate with no permanent disposal sites available, thereby caus-

123. The Court declared that the "point of the 1959 Amendments was to heighten the States' role." *Id.* at 209. *See supra* notes 16-35 and accompanying text.

124. *Id.* at 212.

125. *Id.* at 212-13.

126. *Id.* at 212.

127. *Id.*

128. *Id.*

129. *Id.* at 213 (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 236 (1947)). *See, e.g.*, Fidelity Federal Savings & Loan Ass'n v. de la Cuesta, 458 U.S. 141, 153 (1982) (Federal Home Loan Bank Board's regulation permitting federally chartered savings and loan associations to exercise due-on-sale clause of mortgage barred application of contrary state doctrine).

130. Pacific Gas & Elec. Co., 461 U.S. at 213.

131. *Id.*

132. *Id.*

ing a "clog" in the nuclear fuel cycle.[133] Without a permanent means of disposal, nuclear power becomes an economically uncertain source of power, with the specter of existing plant closures or high waste containment costs looming.[134] The Court upheld the reasoning of the Ninth Circuit,[135] relying upon the Committee report to find that the statute was directed towards purposes apart from radiological hazards and noted that "California is concerned not with the adequacy of the method, but rather with its existence."[136]

The petitioners second main argument was that the California statute and the "judgments that underlie it" conflict with "decisions concerning the nuclear waste disposal issue made by Congress and the [NRC]"[137] evidenced by statutes and detailed regulations governing the handling and storage of spent fuel and waste.[138] The court held that there was no conflict between these regulations and the California statute. The Court concluded this in contrast to the circuit court decision in *Natural Resources Defense Council, Inc. v. NRC*[139] which upheld an NRC determination that, given the progress toward the development of disposal facilities and the availabil-

133. *Id.* at 214 (quoting Reassessment of Nuclear Energy in California: A Policy Analysis of Proposition 15 and its Alternatives at 156 (1975)) (emphasis in original). " 'Waste disposal *safety*' " the report notes, " 'is not directly addressed by the bills, which ask only that a method [of waste disposal] be chosen and accepted by the federal government.' " *Id.*

134. *Id.* at 213-14.

135. *See id.* at 214.

136. *Id.* (quoting Pacific Legal Found. v. State Energy Resource Conservation & Dev. Comm'n, 659 F.2d 903, 925 (9th Cir. 1981)). In upholding the Ninth Circuit decision, the Court reiterated that it places "considerable confidence in the interpretations of state law reached by the federal courts of appeal." *Id.* The Court noted that there are two additional reasons to avoid becoming "embroiled in attempting to ascertain California's *true motive*": first, it is difficult to determine what motivates each individual legislator, and second, such an inquiry would be pointless in light of the states' retained authority not only to determine their own energy needs, but also to halt the construction of new nuclear plants by refusing on economic grounds to issue certificates of public convenience. It is rather for Congress to determine whether a state has abused its retained authority. *Id.* at 216 (emphasis added).

137. *Id.* at 204.

138. *See id.* at 217. In accordance with their authority under the 1954 Act, the AEC and NRC have established regulations concerning both the handling of nuclear materials and the operation of nuclear facilities. These include: 10 C.F.R. § 50.34(b)(2)(i), (ii) (1988) (requires an applicant seeking to receive an NRC operating license to submit a safety analysis report, which must include "radioactive waste handling systems"); 10 C.F.R. pt. 50 App. A, Criteria 60-64 (1988) (specifies design criteria and control requirements of onsite storage and handling of radioactive waste); and 10 C.F.R. pt. 60 (1988) (NRC regulations and requirements concerning offsite storage of nuclear waste and disposal of radioactive waste in geologic formations). The Court acknowledged that no such permanent repository had been found, and the NRC and the DOE continue to authorize storage at reactor sites in pools of water. Pacific Gas & Elec. Co., 461 U.S. at 218. As of this writing, the DOE has tentatively identified Yucca Mountain, Nevada, as the first repository site.

139. 582 F.2d 166 (2d Cir. 1978).

ity of interim storage, the NRC could continue to license new reactors without a permanent disposal site. The Court noted that "[t]he NRC's imprimatur . . . indicates only that it is safe to proceed with such plants, not that it is economically wise to do so."[140] Since the objective of section 25524.2 is economic, it does not therefore interfere with the object of the federal regulation, nor enter a field occupied by the federal government.[141]

The Court also held that the California statute does not create a conflict between itself and the Nuclear Waste Policy Act of 1982.[142] The Court concluded, through an examination of the legislative history, that "[w]hile the passage of this new legislation may convince state authorities that there is now a sufficient federal commitment to fuel storage and waste disposal that licensing of nuclear reactors may resume, and, indeed, this appears to be one of the purposes of the Act, it does not appear that Congress intended to make that decision for the States through this legislation."[143]

The petitioner's final argument was that the California statute frustrated the federal goal of "developing nuclear technology as a source of energy."[144] The Court dismissed this by reiterating the maxim that "state law is preempted if it 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.' "[145] Though the central promotional purpose of the 1954 Act still remains, "promotion of nuclear power is not to be

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140. Pacific Gas & Elec. Co., 461 U.S. at 218. In the *Natural Resources* case, the Court of Appeals noted that "the issue . . . is whether NRC, prior to granting nuclear power reactor operating licenses, is required by the public health and safety requirement of the [1954 Act] to make a determination . . . that high-level radioactive wastes can be *permanently* disposed of safely." Natural Resources Defense Council, Inc. v. NRC, 582 F.2d 166, 170, *quoted in* Pacific Gas & Elec. Co., 461 U.S. at 218 n.29.

141. *Id.* at 219.

142. *Id.* at 219-20. For a discussion of the Act, see *supra* notes 93-104 and accompanying text. Section 111(b) states, *inter alia*, the following purposes:

> (1) to establish a schedule for the siting, construction, and operation of repositories that will provide a reasonable assurance that the public and the environment will be adequately protected from the hazards posed by high-level radioactive waste and such spent nuclear fuel . . . ;
>
> (2) to establish the Federal responsibility, and a definite Federal policy, for the disposal of such waste and spent fuel[.]

42 U.S.C. § 10131(b)(1), (2) (1982).

143. Pacific Gas & Elec. Co., 461 U.S. at 219-20 (footnote omitted). In fact, the Court noted that an attempt was made to amend the bill to provide that the Act would satisfy any legal requirements for the existence of an approved technology and facilities for disposal of spent fuel and high-level nuclear waste. *Id.* at 220.

144. *Id.* at 204.

145. *Id.* at 220-21 (quoting Hines v. Davidowitz, 312 U.S. 52, 67 (1941); Florida Lime Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142-43 (1963); Fidelity Federal Savings & Loan Ass'n v. de la Cuesta, 458 U.S. 141, 153 (1982)).

accomplished 'at all costs.' "[146] In conclusion, the Court refused to acknowledge that there has been a change in congressional outlook since 1974, and stated that it would leave to Congress the task of rethinking the division of regulatory authority "in light of its possible exercise by the States to undercut a federal objective."[147]

B. *Critique of* Pacific Gas & Electric

The Court's decision in *Pacific Gas & Electric* has not been without its critics.[148] Emphatic though the language of the decision may sound, the opinion raises vexing analytical problems which future courts will need to resolve.[149]

The initial criticism of the opinion is found in Justice Blackmun's concurrence.[150] Justice Blackmun joined the Court's opinion "except to the extent it suggests that a State may not prohibit the construction of nuclear powerplants if the State is motivated by concerns about the safety of such plants."[151] This opening sentence sets in stark relief the central problem of the majority opinion. According to the majority, the federal government has "occupied the entire field of nuclear safety concerns, except the limited power expressly ceded to the States."[152] According to Justice Blackmun, the majority's "dictum" is wrong in several respects.

First, the Congress has not occupied the broad field of "nuclear safety concerns" but rather the "narrower area of how a nuclear plant should be constructed and operated to protect against radiation hazards."[153] Under this analysis, the threshold decision whether to build a nuclear plant is within the state's power to determine its own energy needs and consider varying technologies in doing so. In making such an initial decision, states may continue "to exercise their traditional police power over the manner in which they meet their energy needs."[154] Part of that decision necessarily involves consideration of the risks presented by a given technology. Congress does not force States to be blind to whatever special dangers are posed by nuclear plants.[155] Such Court-induced blindness would al-

146. *Id.* at 222.

147. *Id.* at 222-23.

148. The *Pacific Gas & Electric* decision immediately became the focus of contention in the legal, regulatory and regulated communities. *See* Ahearne, *The Supreme Court's Nuclear Bomb*, Wash. Post, May 5, 1983, at A27, col. 2; Wald, *Little Effect Seen From Nuclear Ban*, N.Y. Times, April 26, 1983, at A21, col. 1.

149. *See, e.g.*, Silkwood v. Kerr-McGee Corp., 464 U.S. 238 (1984). *See infra* notes 166-201 and accompanying text (discussing the *Silkwood* decision).

150. Pacific Gas & Elec. Co., 461 U.S. at 223 (Blackmun, J., concurring).

151. *Id.*

152. *Id.* at 212 (footnote omitted).

153. *Id.* at 224 (footnote omitted).

154. *Id.* at 224-25.

155. *Id.*

low heavily regulated utilities to choose nuclear plants free " 'from the regulatory oversight of the one decision which promises to affect the greatest number of persons over the greatest possible time.' "[156] While the "threshold determination" belongs to the state under this analysis, the subsequent decisions on how to construct and operate such a plant "are for the NRC."[157] Anything else would read "too much into the [Atomic Energy] Act, [by] suggesting that it also limits the States' traditional power to decide what types of electrical power to utilize."[158]

Second, Justice Blackmun argued that a safety-motivated state ban on nuclear plant construction would not be preempted on traditional preemption grounds.[159] He argued that the Congress has merely encouraged the development of nuclear power as one choice among many options. Nowhere has it mandated that states must choose this particular source.[160] Standing squarely upon the language of the Energy Reorganization Act of 1974[161] the Justice noted that there is no federal policy forbidding a state "from choosing to rely on technologies it considers safer than nuclear power."[162] Under this Act, the Energy Research and Development Administration is granted authority to "develop, and increase the efficiency and reliability of use of, all energy sources."[163] As the legislative history of the Act shows, one of the purposes of the Act was to dilute some of the overt pro-nuclear bias within the then-existing Atomic Energy Commission and to force the federal government " 'to place greater relative emphasis upon nonnuclear energy.' "[164] This legislation is

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156. *Id.* (quoting Wiggins, *Federalism Balancing and the Burger Court: California's Nuclear Law as a Preemption Case Study*, 13 U.C. DAVIS L. REV. 3, 64 (1979)).

157. *Id.* at 226.

158. *Id.* at 229.

159. *Id.* at 226. Justice Blackmun quotes familiar language when he states that a state regulation conflicts with federal law if it " 'stands as an obstacle to the accomplishment and execution of full purposes and objectives of Congress.' " *Id.* (quoting Hines v. Davidowitz, 312 U.S. 52, 67 (1941)). The majority also quotes this language. *See supra* note 145 and accompanying text.

160. Pacific Gas & Elec. Co., 461 U.S. at 226-27 (Blackmun, J., concurring).

161. For a discussion of the Act, see *supra* notes 63-75 and accompanying text.

162. Pacific Gas & Elec. Co., 461 U.S. at 227 (Blackmun, J., concurring).

163. 42 U.S.C. § 5801(a) (1982).

164. Pacific Gas & Elec. Co., 461 U.S. at 228 (Blackmun, J., concurring) (quoting S. REP. No. 980, 93d Cong., 2d Sess. 14, *reprinted in* 1974 U.S. CODE CONG. & ADMIN. NEWS 5470, 5480). The report notes that the

> [s]ubstantial imput of AEC resources and personnel into the new ERDA caused concern in the committee that nuclear energy personnel and . . . funding might dominate the missions and directions of the new agency. To ensure thhat [sic] this will not occur, [the bill] has been drafted to prohibit any unwarranted bias in favor of a single energy technology, . . . to require that the Administrator and Deputy Administrator of ERDA be qualified as energy "generalists," and to place greater relative emphasis on nonnuclear energy, including such clean renewable sources as solar and geothermal en-

clearly in line with the means that states have retained to prohibit construction of nuclear plants.

In conclusion, Blackmun argued that states can forbid nuclear plant construction, even if motivated by fears of a catastrophe. Leaving such decisions to the states is preferable to an "elusive test" for legislative intent whenever states legislate on nuclear matters.[165]

To summarize, *Pacific Gas & Electric* stands as a conservative, though disturbing precedent. It is conservative in that it seemingly follows prior preemption analysis to the letter and it is disturbing because it casts doubt upon traditional police powers that states have long taken for granted.

C. *A Steady Hand on the Helm? — The* Silkwood *Decision*

To many observers, *Pacific Gas & Electric* seemed to set a course that could be easily followed in subsequent cases. Though the reasoning was far from perfect, its safety-based analysis at least had the virtue of being easy to follow. Eight months later, the Court cast doubt upon its safety-based logic with its decision in *Silkwood v. Kerr-McGee Corp.*[166] The case centered around the controversial figure of Karen Silkwood, who, at the time of her death, was employed by the Kerr-McGee Corporation as a laboratory analyst in its Cimmaron plant in Crescent, Oklahoma. This plant was engaged in the manufacture of plutonium fuel pins for use as nuclear fuel in power plants. During her employment, Silkwood was seriously contaminated by plutonium over a three-day period.[167]

After her mysterious death,[168] the administrator of her estate

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ergy. *However, the committee does not intend to prevent ERDA from placing substantial emphasis on energy technologies that it deems warranted for the purposes of fulfilling its mission.*

S. REP. No. 980, 93d Cong., 2d Sess. 14, *reprinted in* 1974 U.S. CODE CONG. & ADMIN. NEWS 5470, 5480 (emphasis added).

165. Pacific Gas & Elec. Co., 461 U.S. at 229 (Blackmun, J., concurring).

166. 464 U.S. 238 (1984).

167. *Id.* at 241-42. After her death, an autopsy revealed that Silkwood's body contained an amount of plutonium that was between 25% and 50% of the permissible lifetime body burden allowed by NRC for plutonium workers. *See* Silkwood v. Kerr-McGee Corp., 667 F.2d 908, 914 (10th Cir. 1981). In determining the specific level of acceptable contamination, Congress has identified two classes of individuals. The first class includes occupational workers at a radioactive source. The second class includes members of the general public who work or live near a generated source of radiation. The levels for the public are set at one-tenth those set for radiation workers. Note, *Federal Preemption: State Law Principles of Strict Liability in a Nuclear Accident—A Preemption Problem in Light of the Price-Anderson Act?*, 6 U. DAYTON L. REV. 279, 281 n.16 (1981).

168. Silkwood, a controversial union activist, died as a result of injuries sustained when her car left the highway and struck a concrete abutment. Silkwood reportedly was carrying a file of documents that allegedly demonstrated falsification of records by the company dealing with substandard fuel welds. The documents were never recovered. Smith, *Silkwood v. Kerr-McGee Corp.: Preemption of State Law for Nu-*

brought an action for personal injury in the District Court for the Western District of Oklahoma.[169] The diversity action was based on common law tort principles under Oklahoma law and sought recovery for contamination injuries to Silkwood's person and property.[170] The court submitted the claims to the jury on alternative theories of strict liability and negligence.[171] The jury was also instructed with regard to punitive damages. After a lengthy trial, the jury found for the plaintiff by awarding compensatory damages and, forming the focus of contention in this case, punitive damages of $10 million.[172]

After denial of its post-verdict motions,[173] Kerr-McGee appealed the awards to the Tenth Circuit.[174] Before the circuit court, Kerr-McGee was highly successful. The court held that recovery for Silkwood's personal injuries was governed completely by Oklahoma's Workers' Compensation law and reversed the lower court's judg-

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clear Torts?, 12 ENVTL. L. REV. 1059, 1063 n.25 (1982) (citing NEW REPUBLIC, Jan. 18, 1975 at 8-9).

169. Silkwood v. Kerr-McGee Corp., 485 F. Supp 566 (W.D. Okla. 1979).

170. Silkwood v. Kerr-McGee Corp., 464 U.S. at 243.

171. *Id.* at 244. The Court observed:

> The trial court determined that Kerr-McGee had not shown that the contamination occurred during the course of Silkwood's employment. Accordingly, the court precluded the jury from deciding whether the personal injury claim was covered by Oklahoma's Workers' Compensation Act, which provides the sole remedy for accidental personal injuries arising in the course of employment.

Id. Two claims of conspiracy based on the Civil Rights Act of 1871, see 42 U.S.C. § 1985(3), were also asserted in the plaintiff's original petition. The trial court dismissed those claims for failure to state a cause of action. The ruling was affirmed in a separate appeal. Silkwood v. Kerr-McGee Corp., 637 F.2d 743 (10th Cir. 1980), *cert. denied*, 454 U.S. 833 (1981).

172. The trial judge explained the standard by which punitive damages should be awarded as follows:

> "[T]he jury may give damages for the sake of example and by way of punishment, if the jury finds the defendant or defendants have been guilty of oppression, fraud, or malice, actual or presumed. . . .
>
> Exemplary damages are not limited to cases where there is direct evidence of fraud, malice or gross negligence. They may be allowed when there is evidence of such recklessness and wanton disregard of another's rights that malice and evil intent will be inferred. If a defendant is grossly and wantonly reckless in exposing others to dangers, the law holds him to have intended the natural consequences of his acts, and treats him as guilty of a willful wrong."

Silkwood v. Kerr-McGee Corp., 464 U.S. at 244-45 (quoting Silkwood v. Kerr-McGee Corp., 485 F. Supp. at 603 app.).

173. The company moved for judgment n.o.v. or in the alternative a new trial. In its denial, the trial court rejected Kerr-McGee's assertion that compliance with federal regulations precluded an award of punitive damages. The court stated that it is not "inconsistent [with any congressional design] to impose punitive damages for the escape of plutonium caused by grossly negligent, reckless and willful conduct." *Id.* at 245 (quoting Silkwood v. Kerr-McGee Corp., 485 F. Supp. at 585).

174. Silkwood v. Kerr-McGee Corp., 667 F.2d 908 (10th Cir. 1981).

ment for those injuries. The property damage award was upheld because Oklahoma law allowed an award under a theory of strict liability on the facts of the case.[175] Most importantly, the court concluded that such an award was preempted because it constituted state regulation of radiation hazards.[176] The administrator appealed, seeking review of the ruling with respect to the punitive damage award.

In its substantive analysis,[177] the Supreme Court ostensibly utilized the two-pronged analysis of *Pacific Gas & Electric*: congressional occupation of "the entire field of nuclear safety concerns,"[178] and actual conflict or frustration of the full purposes of Congress.[179] In discussing the first prong, the Court reviewed the legislative history of the 1959 Amendments to the original Atomic Energy Act[180] and concluded that the field was occupied by the federal government because the complexity of the subject matter exceeded the technical competence of the states.[181] But complexity arguments, according to the Court, if carried to a logical conclusion, would "disallow resort to state-law remedies" by those injured in nuclear plant incidents.[182] All state tort claims (based on state-sponsored stan-

175. *Id.* at 921.

176. The circuit court adopted the same sort of broad preemption analysis as that of *Northern States Power* and concluded that "any state action that competes substantially with the AEC (NRC) in its regulation of radiation hazards associated with plants handling nuclear material" was not permitted. *Id.* at 923. Punitive awards are preempted because "[a] judicial award of exemplary damages under state law as punishment for bad practices is not less intrusive than direct legislative acts of the state." *Id.*

177. The Court dealt first with a minor jurisdictional matter. The Court had earlier noted probable jurisdiction on Silkwood's appeal from the circuit court and elected to postpone consideration of the issue until the argument on the merits. *See* Silkwood v. Kerr-McGee Corp., 457 U.S. at 1101 (1983) (order granting certain parties leave to file amicus curiae brief). The Court concluded that the *Silkwood* case did not fall within the scope of its appellate jurisdiction. *See* 28 U.S.C. § 1254(2) (1982). Under the Court's appellate jurisdiction, a decision is reviewable by appeal from a federal circuit if the circuit court holds a state statute unconstitutional. The Court held that the circuit court had only invalidated an exercise of authority under the Oklahoma punitive damage statute rather than declaring the statute itself invalid. Silkwood v. Kerr-McGee Corp., 464 U.S. at 247. Because *Silkwood* was technically outside the jurisdictional grant of 28 U.S.C. § 1254(2), the Court elected to treat the administrator's jurisdictional statement as a writ of certiorari, thereby reaching the merits. *Id.* at 248.

178. *Id.* at 248-49 (quoting Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 212 (1983)). *See supra* notes 129-36 and accompanying text.

179. Silkwood v. Kerr-McGee Corp., 464 U.S. at 248 (citing Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 204 (1983)). *See supra* notes 135-41 and accompanying text.

180. *See supra* notes 20-38 and accompanying text.

181. Silkwood v. Kerr-McGee Corp., 464 U.S. at 250 (quoting H.R. REP. No. 1125, 86th Cong., 1st Sess. 3 (1959)).

182. *Id.* at 251.

dards of care) could be at issue, not just punitive awards. The 1954 Act cannot, according to the Court, extend so far, and they justified their conclusion by resorting to the language and history of the Price-Anderson Act, which provides indemnification for licensed nuclear facilities.[183] The Court noted that although the Act "does not apply to the present situation,"[184] the legislative history indicates that "Congress assumed that persons injured by nuclear accidents were free to utilize existing state tort remedies."[185]

The Court waved aside Kerr-McGee's attempt to distinguish between compensatory damages (applied to make the injured party whole) and punitive damages (which have the intent to punish). Both, according to the Court, are part of the traditional state tort remedies preserved by the Act.[186] Though there may be tension between the federal safety mandate and a state's own liability laws, Congress was well aware of this inconsistency and has permitted it to remain absent express word otherwise.[187] While punitive awards may be regulatory in *effect*, the regulatory consequences are apparently something Congress is willing to accept.[188]

In rather summary fashion, the Court rejected the contention that the punitive award is preempted "because it frustrates Congress' express desire 'to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes.' "[189] Though *Pacific Gas & Electric* stands for the proposition that a "primary purpose of the Atomic Energy Act was, and continues to be, the promotion of nuclear power,"[190] this promotion is not to be accomplished "at all costs."[191] In accordance with the intent of the Atomic Energy Act, such promotion is to be carried out to the ex-

183. Price-Anderson Act, Pub. L. No. 85-256, 71 Stat. 576 (1957) (codified as amended at 42 U.S.C. § 2210 (1982)).

184. Silkwood v. Kerr-McGee Corp., 464 U.S. at 251.

185. *Id.* In Duke Power Co. v. Carolina Envtl. Study Group, Inc., 438 U.S. 59, 88, 89 n.32 (1978), the Court upheld the Act's constitutionality, assuming all the while that the Act supplemented existing state remedies. In formulating the Act, the Joint Committee noted that

> [s]ince the rights of third parties who are injured are established by State law, there is no interference with the State law until there is a likelihood that the damages exceed the amount of financial responsibility required together with the amount of the indemnity. At that point the Federal interference is limited to the prohibition of making payments through the State courts and to prorating the proceeds available.

S. REP. No. 296, 85th Cong., 1st Sess. 9, *reprinted in* 1957 U.S. CODE CONG. & ADMIN. NEWS 1803, 1810.

186. Silkwood v. Kerr-McGee Corp., 464 U.S. at 255.

187. *Id.* at 256.

188. *Id.*

189. *Id.* at 257 (quoting 42 U.S.C. § 2013(d) (1982)).

190. *Id.* at 257 (quoting Pacific Gas & Elec. Co. v. State Energy Conservation & Dev. Comm'n, 461 U.S. 190, 221 (1983)).

191. *Id.* (quoting Pacific Gas & Elec. Co., 461 U.S. at 222).

tent it is consistent "with the health and safety of the public."[192] The Court took this to mean that Congress intended to preserve adequate remedies for those injured by exposure to nuclear materials. The foregone conclusion is that the "award of punitive damages in this case does not hinder the accomplishment of the purpose stated in [the Act]."[193]

Like *Pacific Gas & Electric* before it, *Silkwood* is not above criticism. Because of the proximity in time between the two decisions, one would naturally expect *Silkwood* to be a fuller exposition of the principles contained in *Pacific Gas & Electric.* This was not the case. Because the punitive damage award in *Silkwood* was a form of regulation, it should have been preempted under both *Pacific Gas & Electric* tests.[194] Inasmuch as punitive damages punish inadequacies in operational standards, the Court should have found preemption because the federal government had not expressly granted to the states authority to regulate via the medium of punitive damages. Also, unlike the California legislation in *Pacific Gas & Electric,* there was no non-safety rationale in the imposition of punitive damages in this case. The award was clearly designed to punish egregious conduct, conduct which is exactly related to safety.[195] But the Court did not apply either of the *Pacific Gas & Electric* tests in its race to affirm the punitive damage award.[196] As Justice Blackmun notes in his dissent, the "analysis proceeds as though the issue is whether a victim in a nuclear accident can seek judicial recourse for her injuries. That issue is not in dispute. . . . The issue is whether

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192. 42 U.S.C. § 2013(d) (1982).

193. Silkwood v. Kerr-McGee Corp., 464 U.S. at 257.

194. *See supra* notes 129-31 and accompanying text. *See also supra* notes 109-65 and accompanying text (discussing *Pacific Gas & Electric*). In his *Silkwood* dissent, Justice Blackmun states that the Court "tortures its earlier decisions and, more importantly, wreaks havoc with the regulatory structure that Congress carefully created." Silkwood v. Kerr-McGee Corp., 464 U.S. at 259 (Blackmun, J., dissenting).

195. The trial court's jury instructions on punitive damages left little doubt as to the purpose of such awards:

> The basis for allowance of punitive damages rests upon the principle that they are allowed as a punishment to the offender for the general benefit of society, both as a restraint upon the transgressor and as a warning and example to deter the commission of like offenses in the future.

Id. at 261 (Blackmun, J., dissenting). Such an award, Blackmun notes, seeks to regulate the "day-to-day safety procedures of nuclear licensees." *Id.* Since there was no factual finding as to how the contamination of Silkwood occurred, it is "abundantly clear, therefore, that the punitive damages award in this case deters a nuclear facility from *operating* in the same manner as Kerr-McGee. Authority for a State to do so, however, is precisely what the Court held to be preempted in *Pacific Gas.*" *Id.* (emphasis added).

196. Under *Pacific Gas & Electric,* state legislation is preempted regardless of its purpose if it regulates in the area of construction and operation standards; also, state statutes which fall within the federal ambit will be salvaged if they exhibit a non-safety purpose. *See supra* notes 129-31 and accompanying text.

the jury can impose a fine on a nuclear operator in addition to whatever compensation award is given."[197] Having focused on the wrong issue, the Court sought to justify its reasoning by examining the legislative history of the wrong statute, the Price-Anderson Act.[198] At the outset, the *Silkwood* Court paid homage to the precedential force of *Pacific Gas & Electric*[199] and then, mysteriously, looked to the original Atomic Energy Act to determine if Congress had expressed an implied or express intent to preempt state punitive damage awards.[200] Finding no mention of such limits in the Act, the Court then utilized Price-Anderson's reservation of state tort law as a basis for upholding punitive damages. The majority only proved that Price-Anderson does not preempt the *Silkwood* award. There is no exploration of the preemptive effect of the Atomic Energy Act as a whole.[201]

D. *What Can Be Expected After* Pacific Gas & Electric *and* Silkwood?

As both *Pacific Gas & Electric* and *Silkwood* seem to suggest, the analytical framework established by the Court is of less importance to actual questions of preemption than the apparent predisposition of the Court to uphold state regulation undergoing preemption challenges.[202] Both decisions are characterized by majority opinions that frame issues so as to guarantee a fixed result.[203] With the analytical framework established in *Pacific Gas & Electric*, the Court could easily have justified a broader application of preemption in *Silkwood*. The chief point of reconciliation between the two decisions is an unwillingness by the Court to examine closely the underlying purpose of the particular state regulation in question. Had the Court done so, the result would have been different in both cases.[204]

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197. *Id.* at 266.

198. *See supra* notes 183-85 and accompanying text.

199. Silkwood v. Kerr-McGee Corp., 464 U.S. at 249.

200. *Id.* at 250-51.

201. *Id.* at 251-55.

202. *See supra* notes 61-62 and accompanying text.

203. In both *Pacific Gas & Electric* and *Silkwood* the Court bowed to the altar of federal supremacy and then found for the state. *See supra* notes 122-38 and 197-201 and accompanying text.

204. The California moratorium in *Pacific Gas & Electric* survived preemption on the basis of the state's contention that it was, in substance, an economic regulation. The state argued that nuclear plants might shut down as their on-site interim storage capacity was gradually expended. The unpredictability and high costs of such shutdowns, the state claimed, made nuclear-generated power an unwise choice for state energy needs. However, after thirty years of nuclear-generated power, not one plant has been forced to shut down for lack of interim storage capacity, all government doomsaying to the contrary. The majority in *Pacific Gas & Electric* admitted as much. Pacific Gas & Elec. Co., 461 U.S. at 195-96 n.2. As typified by our own nuclear utility, Maine Yankee, nuclear plants have merely expanded their on-site storage ca-

Though the Court claims to uphold a narrowly circumscribed state right "to regulate activities for purposes other than protection against radiation hazards,"[205] the states have been given tacit approval to regulate the "construction and operation"[206] of nuclear power plants. This apparently holds true only if a state can find any credible justification apart from safety or construction and operating concerns.

The future is certain only in its uncertainty. The seeming contradictions in *Pacific Gas & Electric* and *Silkwood* will most certainly continue to cause confusion among federal regulators, state legislators and judges. These two decisions can each be cited for nearly opposite propositions, and this is sure to promote endless legislative wrangling, litigation and continuing federal-state friction. The assured result of such outcome-oriented analysis is a lack of predictability and a prolonged case-by-case determination of key issues. This is bound to impact utilities with nuclear facilities in the planning or construction stage. For them, rational decisions will be hard to come by.[207] Equally true is the fact that state legislatures will continue to pass laws dealing with safety and operation, though they cannot say that they are doing so.[208] This subterfuge results in proposed legislation like Maine's own referendum.[209] It remains to be seen whether such initiatives have a viable future or merely re-

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pacity to cope with the growing number of spent fuel assemblies. There was simply no justification for a total moratorium on new plant construction. The states could have required, as a condition for their certification, sufficient on-site capacity for the expected operational life of the plant. Likewise, in *Silkwood*, the Court simply "looked the other way," justifying state punitive damage awards on grounds that were similarly hypothetical.

205. Pacific Gas & Elec. Co., 461 U.S. at 210 (quoting 42 U.S.C. § 2010(k) (1982)).

206. 42 U.S.C. § 2021(c)(1) (1982).

207. A case in point is Seabrook Unit 2. After expenditure of billions, Public Service Company of New Hampshire is faced with the unenviable task of attempting to secure a return on its investment in a reactor that is, at this writing, only 50% complete. Regardless of one's feelings toward utilities in general and nuclear utilities in particular, one must recognize the gloom that such decisions foster in corporate directors. Without predictability in the law, investment in *anything* becomes virtually impossible.

208. States can derive some reassurance from the fact that the only instance where the Court was willing to allow preemption in the nuclear field was *Northern States Power Co. v. Minnesota*. *See supra* notes 47-58 and accompanying text. This decision is surely indicative of the Court's present attitude concerning the preemptive scope of the Atomic Energy Act. The case dealt with a legislative enactment with the stated purpose to regulate the safety aspects of nuclear plant operation. Significantly, *Northern States Power Co.* was reaffirmed by the *Pacific Gas & Electric* majority in footnote 24 of the opinion. Pacific Gas & Elec. Co., 461 U.S. at 212 n.24. Both *Pacific Gas & Electric* and *Silkwood* indicate that the Act's preemptive scope is limited to such a fact pattern.

209. For a discussion of popular initiative procedure in Maine, see *supra* note 2. *See also* Comment, *Coping with Confusion: A Unitary Procedure for Judicial Review of the Referendum Process*, 41 MAINE L. REV. 113 (1989).

present cul-de-sacs in the history of nuclear power in the United States.

IV. All Things Considered: The Maine Referendum

Would Maine's failed initiative have survived a preemption challenge?[210] More importantly, does the content of such a referendum represent a viable means for states to close nuclear utilities currently operating within their borders? The following analysis is divided into three parts: the first will involve description of the referendum text; the second will consider the possibility of preemption inherent in the elements of the referendum; and the third will propose a referendum statute that is better framed in terms of current nuclear policy.

A. Description

Maine's initiative is cast in the form of additions to its own statutory regulations governing nuclear power generating facilities.[211] These statutes were enacted in the shadow of various federal acts in the late 1970s and early 1980s, as well as the decisional law of the period.[212] Sections in the Maine statutes were deliberately reserved for future enactments,[213] probably to accommodate the shifting character of nuclear law.[214] The proposed referendum would have added to the subchapter dealing with "Spent Fuel and High Level Waste"[215] the following sections:

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210. This entire discussion assumes eventual resolution in the U.S. Supreme Court. If the referendum question *had* gained voter approval, the opening shot by the utility would probably have been fired in U.S. District Court in Portland. Whether the suit would have remained there is open to question. Under abstention doctrine, a federal court, in the exercise of its discretion, may relinquish jurisdiction where necessary to avoid needless conflict with a state over administration of its own affairs. Surowitz v. New York City Employees Retirement Sys., 376 F. Supp. 369, 376 (D.C.N.Y. 1974); Railroad Comm'n of Texas v. Pullman Co., 312 U.S. 496 (1941). In *Pacific Gas & Electric*, the utility challenged the California measure in federal court and the suit remained in the district court.

211. Entitled "Nuclear Power Plants" by a 1983 legislative insertion. *See* Me. Rev. Stat. Ann. tit. 35, §§ 3331-91 (Supp. 1986-1987). This legislation has since been repealed. It was replaced by title 35-A, sections 4301 through 4391 of the Maine Revised Statutes Annotated, entitled, "Nuclear Power Generating Facilities." Me. Rev. Stat. Ann. tit. 35-A, §§ 4301-4391 (1988). The new legislation shows that state legislators well understand the concept of an "initial decision": new section 4302 mandates a referendum to approve any new nuclear plant contemplated for the state. *Id.* § 4302 (1988).

212. For discussion of recent statutory and decisional law, see *supra* notes 76-104 & 109-201 and accompanying text.

213. As noted, this legislation has been repealed and replaced. *See supra* note 211.

214. For discussion of recent statutory and decisional law, see *supra* notes 76-104 & 109-201 and accompanying text.

215. This heading has also been replaced by new legislation. *See supra* note 211.

§ 3367. Declaration of findings

The people of the State of Maine declare:

A. That there currently exists no acceptable means to dispose of high-level nuclear waste;

B. That the people of Maine are inalterably opposed to the consideration of any Maine location for the disposal or long-term storage of high-level waste;

C. That it is irresponsible to continue the production of high-level nuclear waste in light of the above.

. . . .

§ 3368. Production of high-level nuclear waste

After July 4, 1988, no nuclear fission thermal power plant may generate electrical power within the State by means which result in the production of high-level waste.[216]

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216. L.D. 20, §§ 1, 2 (113th Legis. 1987). The text of the accompanying statement of fact is as follows:

The purpose of this bill is to provide a mechanism by which the voters of this State may express their will on the continued generation of electric power which results in the production of high-level radioactive waste within the State. Section 1 of this bill makes a declaration of findings concerning the inconsistency in the continued production of high-level nuclear waste in light of the Federal Government's failed program to dispose of it. Section 2 of the bill prohibits, subject to voter approval, the production of high-level radioactive waste after July 4, 1988, by electricity-generating nuclear power plants operating in Maine. Enactment and popular approval of this bill is an exercise of traditional state authority to regulate the generation, sale and transmission of electric power for purposes other than protection against radiation hazards.

The prohibition on the generation of high-level radioactive waste after July 4, 1988, which this bill proposes to present to the voters is based upon the following.

1. It is irresponsible to continue the production of high-level nuclear waste when there is clearly no acceptable method of disposal.

2. Most of the high-level radioactive waste produced in Maine is produced by the generation of electric power. The Federal Government has failed to provide a reasonable method to dispose of that waste, despite years of study and assurances that disposal facilities are feasible and, indeed, forthcoming. Although there is widespread public opposition to the location of a high-level disposal site in Maine, Maine is, nevertheless, under active consideration for such a site. Maine will make the strongest and most responsible argument to be dropped from consideration by the Federal Government as a site by discontinuing the production of high-level nuclear waste within its borders.

3. There are unacceptably high economic costs associated with the generation, isolation, transportation and ultimate disposal of high-level radioactive waste produced by the generation of electric power.

4. Much of the low-level radioactive waste produced in Maine is also the result of the generation of electrical power. Maine is currently faced with the problem of finding a disposal site for its low-level radioactive waste. Ceasing the production of high-level radioactive waste will result in curtailing the production of low-level radioactive wastes which will make it easier for Maine to meet the responsibility imposed by federal law to dispose of its low-level radioactive waste.

As one can readily see, the proposed prohibition on nuclear generation is linked to a statement of policy by the "people of Maine" concerning the practicality of current federal efforts to dispose of nuclear waste. The proposed text boldly states that "no acceptable means" currently exist to dispose of high-level waste.[217] At first glance, there is a question whether "means" in this instance refers to a specific technology or to a program to implement that technology. The accompanying fact statement makes clear, however, that the proponents of the bill intended both meanings: the introduction notes the "Federal Government's failed program to dispose" of nuclear waste[218] and section 2 further states that the national government "has failed to provide a reasonable method to dispose of that waste, despite years of study and assurances that disposal facilities are feasible and, indeed, forthcoming."[219]

In this case, both the method and the program refer to the Nuclear Waste Policy Act of 1982[220] which provides for permanent disposal of waste and spent fuel in geologic repositories[221] located in selected sites.[222] Under the 1982 Act, the Secretary of Energy must nominate to the President a limited number of selected sites[223] which the President then sends on to Congress for approval.[224] Before such a recommendation takes place, however, the Secretary must hold public hearings "in the vicinity" of each site to "inform the residents of the area in which such site is located of the proposed nomination of such site and to receive their comments."[225] As was stated in the introduction to this Comment, the 1987 referendum was proposed at a time of vociferous public outcry against the selection of Maine as a possible repository site by the Nuclear Regulatory Commission.[226] The legislative document's fact statement

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5. By delaying the prohibition imposed by this bill to July 4, 1988, a reasonable time is provided to allow for the orderly transition to other methods of electrical generation.

Id. Statement of Fact (113th Legis. 1987).

217. L.D. 20, § 1 (113th Legis. 1987).

218. L.D. 20, Statement of Fact, Introduction (113th Legis. 1987).

219. *Id.*

220. *See supra* notes 93-104 and accompanying text.

221. Under the Act, "repository" means "any system licensed by the Commission that is intended to be used for, or may be used for, the permanent deep geologic disposal of high-level radioactive waste and spent nuclear fuel, whether or not such system is designed to permit the recovery, for a limited period during initial operation, of any materials placed in such system." 42 U.S.C. § 10101(18) (1982). The Act's statement of policy declares that repositories are to be the focus of waste disposal efforts. *Id.* § 10131(b)(1) (1982).

222. *Id.* § 10132(a) (1982).

223. *Id.* § 10132(b)(1)(A)-(C) (1982).

224. *Id.* § 10134(a)(2)(A) (1982).

225. *Id.* §§ 10132(b)(2), 10134(a)(1) (1982).

226. *See supra* text accompanying note 3.

notes the "widespread public opposition" to a possible Maine site. This is probably a direct reference to the violent outcry at the 1986 federal hearings conducted in various Maine communities.[227]

The language of section 3367(A) of the Maine bill makes clear that its proponents believe there is "no acceptable method of disposal" for nuclear waste.[228] The proponents' belief conflicts with stated federal policy, however. The Nuclear Waste Policy Act of 1982 clearly indicates that Congress believes there is an acceptable disposal method, namely, storage in geologic repositories.[229] Section (B) links such a belief with opposition to the selection of any Maine location for nomination to the President as a repository site.[230] Finally, section (C) concludes the syllogism by stating that "it is irresponsible to continue the production of high-level waste in light of" both the perceived lack of technology and public opposition. This section is especially interesting because it reveals the motives of its proponents: to make a "statement." Section 2 of the accompanying fact statement announces that Maine "will make the strongest and most responsible argument to be dropped from consideration" as a repository site by ceasing production of high-level waste. The finding further states that "most of the high-level radioactive waste produced in Maine is produced by the generation of electric power,"[231] and hence, the proposed section 3368 of the statute mandates a prohibition of nuclear power. Since there is only one nuclear utility in Maine, the focus is clear: Maine Yankee must be closed. This, presumably, would cause a determined federal government to avert its gaze from Maine when choosing a repository site.[232]

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227. L.D. 20, Statement of Fact, § 2 (113th Legis. 1987). For the full text of the fact statement, see *supra* note 216.

228. L.D. 20, Statement of Fact, § 1, (113th Legis. 1987). For the full text of the fact statement, see *supra* note 216.

229. Part A of the 1982 Act deals exclusively with repositories for waste and spent fuel. In the statement of findings which begin the subpart, Congress states that efforts over the past thirty years "have not been adequate" and notes that radioactive waste requires "acceptable methods of disposal." 42 U.S.C. § 10131(a)(3), (1) (1982). The "acceptable method," as the involved provisions of the statute demonstrate, is "to establish a schedule for the siting, construction, and operation of repositories . . . ." *Id.* at (b)(1).

230. For the mechanics of the selection process, see 42 U.S.C. §§ 10131-10145 (1982). *See also supra* notes 93-104 & 224-26 and accompanying text.

231. L.D. 20, Statement of Fact, § 2 (113th Legis. 1987). *See supra* note 216.

232. Clearly, this is what the proponents of the 1987 referendum used as their raison d'etre for such a shutdown, at least this time around. The Energy and Natural Resources Committee of the Maine Legislature sponsored a public hearing on March 25, 1987, to hear comments on the passage of the referendum through the Legislature on its way to the voters. At that hearing, Alva Morrison of the Maine Nuclear Referendum Committee (the organization behind all three referenda) presented a prepared statement which railed at the "Federal nuclear waste tyrrany" [sic]:

> The other hair-raising scheme to bail out the nuclear waste industry by dumping their waste in Maine's land and water is, of course, the plans that

With the *Pacific Gas & Electric*[233] and *Silkwood*[234] cases in mind, there is at least a nod to the rationale in those decisions: the fact statement announces that "[e]nactment and popular approval of this bill is an exercise of traditional state authority to regulate the generation, sale and transmission of electric power for purposes other than protection against radiation hazards"[235] and that there are "unacceptably high economic costs" associated with generation and disposal of such waste.[236] As explained above, *Pacific Gas & Electric* dealt with the limits of state legislative authority over the "economics" of nuclear power, while *Silkwood* discussed whether imposition of state punitive damages on a nuclear facility was regulation of operation or merely an exercise of traditional state powers.

B. Preemption Inherent?

Can a popular referendum to close an operating nuclear plant survive a preemption challenge? This Comment contends that even a properly worded referendum[237] (or regular legislation, for that matter) would have a doubtful prospect for survival, and that the Maine referendum, grounded as it is in waste disposal concerns, would have a short life expectancy indeed. An analysis of any closure initiative must first begin with a key issue: does closure constitute impermissible state regulation in the field of plant "operation",[238] or can it be

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> the Federal Department of Energy (or D.O.E.) has developed for a high-level waste fuel rod dump in Maine granite. I need not, I presume, go into gruesome detail about the technical inadequacy of the D.O.E. plans, or the gross incompetence that they have shown us.
>
> But there is also a close connection between the initiated bill which you are now considering, and the threat of a high-level nuclear waste dump in Maine. Last year, Hunter Weiler, the regional D.O.E. director, spoke to this point when he told us, "It is very hard for the State of Maine to be fighting us as hard as they are on the one hand . . . and at the same time have a nuclear plant cooking away and generating nuclear waste." . . . [A] vote in favor of L.D. 20 is a signal to the D.O.E. that we in Maine are serious about our opposition to a nuclear dump. We won't make it and we won't take it! . . . As I hope I have demonstrated, there is a direct connection between the making of nuclear waste at Maine Yankee and the dumping of nuclear waste in Maine. . . .

A. Morrison, Testimony of the Maine Nuclear Referendum Committee on L.D. 20 (March 25, 1987) (on file with the *Maine Law Review*).

233. *See supra* notes 109-65 and accompanying text.

234. *See supra* notes 166-201 and accompanying text.

235. L.D. 20, Statement of Fact, Introduction (113th Legis. 1987). For the text of the bill, see *supra* note 216.

236. L.D. 20, Statement of Fact, § 3 (113th Legis. 1987). For the text of the bill, see *supra* note 216.

237. For the purposes of analysis, the actual referendum will be examined first. The referendum will then be discussed in a hypothetical form which eschews all references to concerns over a state waste repository and clothes itself in economics and traditional state regulatory garb.

238. According to the *Pacific Gas & Electric* Court, "construction and operation"

viewed as the legitimate reversal of a state's "initial decision"[239] to accept nuclear power? As the Court in *Pacific Gas & Electric* made clear, any state's attempt to regulate operation, "even if enacted out of nonsafety concerns, would nevertheless directly conflict with the NRC's exclusive authority over plant . . . operation."[240] This was balanced, in the Court's mind, by the states' "traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like."[241]

The distinction between "operation" and "initial decisions" by the state under its police power is not an easy one to establish. As far back as the 1960s, courts have tried to articulate the limits of acceptable state police power in this area. In *Northern California Assoc. to Preserve Bodega Head & Harbor, Inc. v. Public Utilities Commission*,[242] the California Supreme Court determined that inquiry into the initial siting of nuclear plants was part and parcel of a state's legitimate police power. Unlike the court in *United States v. City of New York*,[243] the *Bodega Head* court declined inquiry into any deeper motives that might underlie state reactor siting requirements.[244] By contrast, the *City of New York* court rejected a restrictive siting ordinance by the city on the grounds that it was an attempt to regulate in the area of radiological hazards. In both cases, battle was joined *before* the construction or activation of a nuclear facility. Presumably, Maine exercised its legitimate authority in the 1960s, before the construction of Maine Yankee. The existence of the Wiscasset plant is mute testimony that the state gave its approval. Whether the state could revoke such approval under its po-

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of a nuclear plant constitutes an area totally occupied by federal regulation. *See supra* notes 113-27 and accompanying text. The Court adopted the plain language of section 274(c) of the 1959 Amendments to the Atomic Energy Act of 1954. *See supra* text accompanying note 27.

239. *See supra* note 116 and accompanying text.

240. Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 212 (1983). *See also* text accompanying *supra* note 127.

241. Pacific Gas & Elec. Co., 461 U.S. at 212. "There is little doubt that under the Atomic Energy Act of 1954, state public utility commissions or similar bodies are empowered to make the initial decision regarding the need for power." *Id.* at 206 (quoting Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 550. (1978)).

242. 61 Cal. 2d 126, 390 P.2d 200, 37 Cal. Rptr. 432 (1964). *See supra* notes 41-42 and accompanying text.

243. 463 F. Supp. 604 (S.D.N.Y. 1978). *See supra* notes 41 & 43 and accompanying text.

244. 390 P.2d at 204. The California court stated,

> [R]espondent commission *unquestionably* has authority to inquire into safety questions apart from radiation hazards. . . . [I]t is *clear* that the federal government has not preempted the field . . . and that the states' powers in determining the locations of atomic reactors are not limited to matters of zoning or similar local interests other than safety.

Id. (emphasis added).

lice power is problematic.

To answer this question, one must resort to speculation. The *Pacific Gas & Electric* Court, as previously noted, set up an analytical framework which it ignored in deciding the case,[245] thereby prompting Justice Blackmun to refer to it as "dictum" in his concurrence.[246] The Court held that the California moratorium on *future* construction did not fall into the forbidden field of nuclear safety concerns completely occupied by the NRC, nor did it frustrate the full purpose of Congress.[247] The Court arrived at its decision only because it accepted the stated economic rationale of the California moratorium statute. If the California action had involved the closure of an existing plant, it is unclear whether the Court could have used an outcome-oriented analysis. Unlike the forward-looking indirectness of the Nuclear Laws, a mandatory closure, even for non-safety reasons, would likely be viewed as a direct challenge to the "operation" of an existing facility. "Closure" would have to be described in non-operational terms so as to avoid once again the stated analysis and uphold state regulation.[248]

Unfortunately, there is no sure way to assess the lengths to which the Court would go to sustain state regulation. As we have seen in *Silkwood*, the Court was prepared to uphold state punitive damage claims against federally licensed nuclear facilities.[249] It was able to manage this feat by a cursory examination of the *words* of the

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245. *See supra* notes 148-59 and accompanying text.

246. Pacific Gas & Elec. Co., 461 U.S. at 224 (Blackmun, J., concurring). The Court in *Silkwood* also paid homage to *Pacific Gas & Electric* and then similarly proceeded with an "outcome-oriented" analysis to uphold state regulation. Justice Blackmun dissented on this occasion. *See supra* text accompanying notes 166-201.

247. *See supra* notes 125-47 and accompanying text.

248. The Court's dictum is clear. Pacific Gas & Elec. Co., 461 U.S. at 212. *See also supra* notes 122-28 and accompanying text. In October, 1987, the Maine State Planning Office submitted its own report on the proposed shutdown to Gov. John McKernan. Public Advocate Stephen G. Ward provided the legal analysis in the report. He was aware of this language in *Pacific Gas & Electric* and stated that

> [t]here can be little question that a state law closing a nuclear plant due to waste disposal and safety concerns would be found unconstitutional based on the *Pacific Gas and Electric* analysis, unless Congress itself amended the Atomic Energy Act to authorize state safety regulation of nuclear power. In the event that the 1987 Referendum were perceived, presented and defended as a reasonable effort to regulate nuclear power plant operation for reasons other than public health and safety, the outcome is less clear.

MAINE STATE PLANNING OFFICE, THE EFFECTS OF A MANDATORY EARLY SHUTDOWN OF MAINE YANKEE, App. 1 at 10. This language is puzzling, for the *Pacific Gas & Electric* Court says that regulation of operation is forbidden to the states, regardless of motive. If he is referring to operational regulation that is, by a judicial *tour de force*, made non-operational, then this writer would agree. In any event, he seems simply to rely upon the verbal formula laid down by the Court, without any further analysis. This is surprising in a planning document destined for the Governor's desk.

249. *See supra* notes 166-93 and accompanying text.

Atomic Energy Act. The analysis of the Act was complete when the Court was unable to find any mention of state punitive awards.[250] By turning quickly to the Price-Anderson Act, the Court was then able to find a justification for its decision.[251] In doing so, the Court was able to sidestep the issue that was so clearly put by the respondent: whether " 'regulation can be as effectively exerted through an award of damages as through some form of preventive relief.' "[252] Through this analysis, the Court appears to be following the preemptive course it set for itself during the Burger years.[253] In *Pacific Gas & Electric* and *Silkwood*, the Court has demonstrated its willingness to follow the lead set in cases like *New York State Department of Social Services v. Dublino*, *Goldstein v. California* and *DeCanas v. Bica*.[254] As previously discussed, the Burger Court redefined a federally-oriented doctrine of preemption to one that was strongly weighted in favor of state regulation. This was true even though state regulation entered areas concurrently regulated by the national government. What this means for any state closure referendum is that the Court will probably presume that it is valid unless clearly shown otherwise.

To say that the Court must be "clearly shown otherwise" necessarily implies some scrutiny of the legislative intent of the statute or practice in question. With respect to federal statutory *interpretation*, the Court has involved itself in extensive examination of legislative intent.[255] When faced with *voiding* a particular federal statute, however, the Court has expressed great reluctance.[256] When faced

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250. Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 251 (1984). *See supra* notes 166-201.

251. Silkwood v. Kerr-McGee Corp., 464 U.S. at 251. *See supra* notes 183-88.

252. Silkwood v. Kerr-McGee Corp., 464 U.S. at 249 (quoting San Diego Bldg. Trades Council v. Garmon, 359 U.S. 236, 247 (1959)).

253. *See supra* notes 59-62 and accompanying text. The operative question remains: how far may the states go?

254. *See supra* notes 59-62 and accompanying text.

255. *Pacific Gas & Electric* and *Silkwood* are classic examples of the practice. In *Pacific Gas & Electric*, the Court examined the legislative history of the 1959 Amendments to the 1954 Atomic Energy Act. Pacific Gas & Elec. Co., 461 U.S. at 205-12. In *Silkwood*, the Court examined the *words* of the AEA but ignored its legislative implications. The Court instead turned to the Price-Anderson Act to justify its decision. Silkwood v. Kerr-McGee Corp., 464 U.S. at 451-56. Nor has the Court been bashful about implying intent from mere silence on the part of Congress: the *Silkwood* Court implied congressional consent concerning state punitive damages claims from the failure by Congress to mention them in the Atomic Energy Act. *Id.* at 451.

256. For a characteristic statement of such reluctance, see United States v. O'Brien, 391 U.S. 367 (1968). The Court stated:

> Inquiries into congressional motives or purposes are a hazardous matter. When the issue is simply the interpretation of legislation, the Court will look to statements by legislators for guidance as to the purpose of the legislature . . . . It is entirely a different matter when we are asked to void a statute that is, under well-settled criteria, constitutional on its face, on the

with the option of voiding a *state* enactment, the Court is also reluctant to inquire into hidden motives that might exist in a particular piece of legislation. Motives behind state legislation are particularly difficult to divine anyway, because there is seldom the wealth of committee material and testimony as there is in the Congress. When faced with voiding a California statute, the *Pacific Gas & Electric* Court refused to find untoward motives that might underlie the California moratorium, relying instead upon the word of the California Assembly report discussing the waste disposal problem.[257] At the same time, however, the Court also made the point that it was needless to do so, as it had already determined that the moratorium was within the scope of traditional state authority.[258] The Court was content with the "specific indicia" of intent in the Warren-Alquist Act.[259]

In the case of the 1987 Maine referendum, actual *legislative* intent is less of an issue. Since the measure originates not in the legislature itself, but among the organizations sponsoring the petition drive,[260] intent can be analyzed in two ways: from the standpoint of the sponsoring organizations or from the standpoint of the individual citizens who would vote to affirm the referendum. If viewed from the former perspective, the intent would presumably be easy to identify: the motives behind a petition would be on public display both in the media and by the oral and published testimony of the organization members themselves. If viewed from the latter perspective, intent would be impossible to determine because no one could hope to know the individual motivation of each member of the electorate.[261] Thus, if the Court did not accept the specific indicia of intent on the face of the legislation (however innocuous), motives would be difficult to determine from a voter-oriented analysis. The only other alternative would be to inquire into the expressed goals and motives of the sponsoring group itself. The primary sponsoring group for all three Maine referenda was the Maine Nuclear Referendum Committee. This organization's safety-based fears are well

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> basis of what fewer than a handful of Congressmen said about it. What motivates one legislator to make a speech about a statute is not necessarily what motivates scores of others to enact it, and the stakes are sufficiently high for us to eschew guesswork.

Id. at 383-84. Though *O'Brien* dealt with *federal* statutory interpretation, the Court in *Pacific Gas & Electric* utilized this case in its discussion of the "true motive" that might underlie the California legislation. Pacific Gas & Elec. Co., 461 U.S. at 216.

257. Pacific Gas & Elec. Co., 461 U.S. at 213-16.

258. *Id.* at 216.

259. *Id.*

260. *See supra* note 2 (summarizing the mechanics of popular referenda under the Maine Constitution).

261. As the Court has acknowledged, what motivates each *legislator* is nearly impossible to determine; a similar inquiry into the individual mind of the electorate would be hopeless. *See supra* note 256.

known. Whether the Court would rest its analysis upon the motives of the sponsoring group is simply unknown.

In the case of the present statute, the analysis takes a different shape. The Maine initiative *does* exhibit "specific indicia," but not the indicia which would cause the Court to look favorably upon it. As was previously noted,[262] the legislative document in question links a closure of Maine Yankee with the perceived failure of the Nuclear Waste Policy Act of 1982.[263] The fact statement repeatedly refers to the "Federal Government's failed program to dispose [of nuclear waste]",[264] and it is clear from the earlier examination of proposed section 3367(A) and the fact statement that both the method and particular program are under assault.[265] These points of contention fly in the face of the Act itself, which identifies geologic repositories as an "acceptable means" of disposal,[266] and previous case law which flatly contradicts the assertion "[t]hat it is irresponsible to continue the production of high-level waste in light [of such a failed policy]."[267] The 1982 Act states categorically that one of its purposes is "to establish the Federal responsibility, and a definite Federal policy, for the disposal of such waste and spent fuel."[268] The Act includes a carefully constructed mechanism for federal-state cooperation and a complete financing scheme to place the costs of disposal squarely upon those that produce the radioactive material. Unfocused accusations do not turn the Act into failed policy.

Case law also seems to contradict the claim of "irresponsibility." In *Pacific Gas & Electric* the Court cited with approval[269] *Natural Resources Defense Council v. NRC*.[270] In 1977, the NRC was asked by the Natural Resources Defense Council to halt reactor licensing until it had determined that there was a method of permanent disposal for high-level waste. The NRC concluded that, given the pro-

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262. For a description of the legislative document, see *supra* notes 211-36 and accompanying text.

263. For a description of the 1982 Act, see *supra* notes 93-104 & 220-26 and accompanying text.

264. L.D. 20, Statement of Fact (113th Legis. 1987).

265. *See supra* text accompanying notes 220-27.

266. H.R. No. 941, 97th Cong., 2d Sess. 29, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 3792, 3796. The House Report notes that

> [t]he status of our technical ability to provide these permanent disposal facilities, or "repositories", is considered by the Committee to be technically advanced to a point which justifies implementation of the technology. Scientific reviews of the proposed design of deep geologic repository systems repeatedly show that in principle the hazards of nuclear waste disposal are small.

Id.

267. L.D. 20, § 1 (113th Legis. 1987).

268. 42 U.S.C. § 10131(b)(2) (1982).

269. Pacific Gas & Elec. Co., 461 U.S. at 218-19.

270. 582 F.2d 166 (2d Cir. 1978).

gress toward the development of disposal facilities and the availability of interim storage, it could continue to license new reactors.[271] This case was decided five years before the passage of the Nuclear Waste Policy Act. The Court in *Pacific Gas & Electric* stated that "[t]he NRC's imprimatur, however, indicates only that it is safe to proceed with such plants, not that it is economically wise to do so."[272] Though the Court finds no use for this case in its discussion of the economics of nuclear power, it does tacitly admit that continued production of spent fuel assemblies and waste is not "irresponsible" or unsafe even without a plan for permanent disposal. Critics could argue that this is a certification of safety, while the "irresponsibility" of which the referendum speaks is economic. The accompanying fact statement does address the high economic costs "associated with the generation, isolation, transportation, and ultimate disposal of high-level radioactive waste produced by the generation of electric power."[273] However, under the provisions of the 1982 Act, the costs of both interim storage[274] and permanent storage[275] are borne entirely by the producers of such waste. The states pay nothing.[276] The only cost borne by the state is the presence of the repository itself. Having dealt with safety and economic concerns, it is difficult to find other legal criteria for an argument based upon "irresponsibility."

In their discussion of the 1982 Act, the *Pacific Gas & Electric* Court indicated that "[w]hile the passage of this new legislation may convince state authorities that there is now a sufficient federal commitment to fuel storage and waste disposal that licensing of nuclear reactors may resume . . . it does not appear that Congress intended to make that decision for the States through this legislation."[277]

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271. *Id.* at 168-69.

272. Pacific Gas & Elec. Co., 461 U.S. at 218.

273. L.D. 20, Statement of Fact, § 3 (113th Legis. 1987).

274. 42 U.S.C. § 10156 (1982).

275. *Id.* § 10222 (1982).

276. Section 10131(a)(5) states that

> the generators and owners of high-level radioactive waste and spent nuclear fuel have the primary responsibility to provide for, and the responsibility to pay the costs of, the interim storage of such waste and spent fuel until such waste and spent fuel is accepted by the Secretary of Energy in accordance with the provisions of this chapter.

Id. § 10131(a)(5) (1982). Section 10131(b)(4) states that one of the purposes of the Act is

> to establish a Nuclear Waste Fund, composed of payments made by the generators and owners of such waste and spent fuel, that will ensure that the costs of carrying out activities relating to the disposal of such waste and spent fuel will be borne by the persons responsible for generating such waste and spent fuel.

Id. § 10131(b)(4) (1982).

277. Pacific Gas & Elec. Co., 461 U.S. at 219-20.

States could therefore choose not to rely on upon the Act for future plant construction. However, the Court noted that the Act was most certainly "directed at solving the nuclear waste disposal problem for existing reactors without necessarily encouraging or requiring that future plant construction be undertaken."[278]

Is the Nuclear Waste Policy Act of 1982 a "failed program"? Is this for the states to decide? Since there has been no repudiation of the 1982 Act by Congress, one naturally assumes that reports of its demise are greatly exaggerated. One would also assume that the Court would agree. There is no Supreme Court decision which gives a state the option to pronounce unilaterally the last rites over recent federal legislation. Congress must pronounce its own benediction.

In conclusion then, all the "specific indicia" contained in L.D. 20 point to judicially impermissible motives.[279] The unfocused condemnation of the 1982 Act can only be a smokescreen for safety concerns associated with the operation of a working nuclear plant and the disposal of its byproducts. There is no other conclusion. If this initiative was presented to the Court, it would not withstand analysis. Though the penchant of the Court would be to uphold state legislation in the first instance, it could not do so if the initiative was framed explicitly in terms that reject, on *safety* grounds, the 1982 Act. It is folly to think that an existing reactor can be closed on the basis of safety questions concerning the waste disposal plan passed by Congress. This is the "hook" upon which the Court could base its preemption of the Maine referendum, and do so without violating its orientation in favor of the states.

C. *A Proposed Referendum*

As discussed, the "specific indicia" of the 1987 referendum condemn it to preemption in the federal courts. To avoid a similar fate, any future referendum must be crafted to provide only those indicia which are in the solid mainstream of nuclear policy. The following recommendations illustrate this orientation.

First, stress the economics of nuclear power. In spite of the implementation of the Nuclear Waste Policy Act of 1982, hidden and deferred costs might well remain. The Court in *Pacific Gas & Electric* specifically allowed the states to disbelieve federal assurances that the 1982 Act would solve the economic problems associated with waste from future plants.[280] If states may assess the economics of *future* plants, then it is only a small logical step to allow the same discretion with regard to *existing* plants. As long as Maine gently turns its nose up at the 1982 Act for reasons *other* than safety, this

278. *Id.* at 220.

279. Any remaining doubts would be dispelled by the public statements of the referendum's chief proponents. *See supra* note 232.

280. Pacific Gas & Elec. Co., 461 U.S. at 219-20.

step might be allowed. This is, however, a weak argument in light of the Supreme Court's analysis in *Pacific Gas & Electric.*

Second, this logical leap is easier for a federal court to make if it is couched in the language of traditional state power. The Supreme Court has emphasized that the "States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost, and other related state concerns."[281] Justice Brandeis once noted that the "franchise to operate a public utility . . . is a special privilege which . . . may be granted or withheld at the pleasure of the State."[282] A comparative assessment of the long-term cost and reliability of nuclear power is part of Maine's initial decision to grant a franchise to operate a particular utility. Arguably, a reassessment of these costs is also part of Maine's "special privilege" and the franchise, once granted, may also be revoked.

Third, stress that any prohibition of nuclear generation is due to the belief that there are more reliable and longer-lasting alternatives available. The Energy Reorganization Act of 1974 changed the focus of energy production in the United States from preoccupation with nuclear power to a broad-based search for many sources of energy.[283] Such a change in policy arguably gives states the option to search continuously for the best energy alternatives. This allows Maine the flexibility to rethink its own energy decisions.

Fourth, avoid all references to construction and operation of nuclear power plants. As indicated in the discussion above, these areas are exclusively within federal control. States may not interfere in this area, whether such interference is motivated by safety or not.

With these points in mind, such a legislative document might look like this:

> Be it enacted by the People of the State of Maine:
> 35-A M.R.S.A. § 4304 is enacted to read:
>
> **§ 4304. Prohibition of Nuclear Generation**
>
> Production of electricity by nuclear fission thermal power plants is prohibited after (date).
>
> Statement of Fact
>
> The People of the State of Maine make the following findings of fact:
>
> 1. The operation of nuclear fission thermal power plants presents unknown economic costs when compared with available alternatives. This uncertainty hinders accurate long-range planning of the State's energy needs.

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281. *Id.* at 205.

282. Frost v. Corporation Comm'n, 278 U.S. 515, 534 (1929) (Brandeis, J., dissenting). This dissent is cited with approval in Pacific Gas & Elec. Co., 461 U.S. at 205.

283. *See supra* notes 63-75 and accompanying text.

2. The operation of nuclear fission thermal power plants creates an unreasonable risk of unreliability in the provision of energy services, compared with available alternatives.

3. This act constitutes an exercise of state authority to regulate the generation, sale and transmission of electric power for purposes other than protection against radiation hazards.

This statement of fact is hardly original. Referendum proponents will recognize it as a close relation of the legislative document voted upon in the 1982 referendum.[284] For the purposes of avoiding federal preemption, this legislative document was particularly well written. One wonders why closure proponents did not stick with this formula in 1987. Though this proposal might give the federal courts pause, the measure must still be passed for this to occur. Another referendum, anyone?

V. CONCLUSION

At the time of this writing, the third initiative stands soundly defeated at the polls. Any future attempt to utilize this vehicle to close Maine Yankee will also have to run the electoral gauntlet. Would such a referendum ever pass? At this time it seems doubtful, unless the voting public's perception of the plant changes dramatically. This could only occur if the Wiscasset plant was perceived as more of an immediate threat. Speculation about the misfortune which could trigger such reappraisal is unworthy business indeed.

If such a referendum was indeed passed, it would require careful crafting. Only then could it hope to withstand judicial scrutiny. The present initiative bears none of the hallmarks of careful crafting and remains a quixotic gesture.

The importance of this failed referendum goes beyond the perpetual menu of partisan politics and pressure groups. Viewed nationally, the recent initiative is an indication of fundamental dissatisfaction with current United States nuclear policy. An examination of current legislation and court decisions reveals a regulatory structure which "suffers from an abundance of flesh and a corresponding excess of frailty."[285] Without fundamental changes, nuclear generation and regulation will continue on an ad hoc basis. We need a stronger and more clearly defined regulatory structure. Only a thorough overhaul of current legislation will fill that need.

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284. *See* L.D. 1989 (110th Legis. 1982).

285. Huber, *Electricity and the Environment: In Search of Regulatory Authority*, 100 HARV. L. REV. 1002, 1063 (1987). *See* W. SHAKESPEARE, KING HENRY IV, Part I, act III, scene iii, lines 187-88.